THE AMERICAN FARMER

ESTABLISHED 1819

NINTH SERIES. BALTIMORE, MD., JULY 15, 1884. VOL. III.—No. 14.

Soluble and Insoluble Phosphates.

Messrs. Editors American Farmer:

The remarkable system of experiments, published by the Aberdeenshire Association, are not accessible to the majority of your readers. I have sent several extracts from the copy which I have to the agricultural press, and now I propose to you that you permit me to lay before your readers the very important and suggestive remarks of the Marquis of Huntley in moving the adoption of the chemist's report at the fifth annual meeting of the association. He spoke as follows:

"I have much pleasure in moving the adoption of the report for the fourth time, I believe. The association has now reached the fifth year of its existence, and after four years of exposure to criticism, the original conclusions at which we arrived in 1876 are reproduced. These conclusions have been confirmed in each successive year, and it is necessary that they shall be reproduced till opposition is practically over and they become recognized as correct. It has certainly amused those who have followed the correspondence in the newspapers to watch the slow advances and the lowly stage of the criticisms; and I hear it on all sides, that there is but one opinion, viz: that our able chemist has held his own not only in the opinions he has expressed, but in the newspaper warfare to which he has been subjected. The first conclusion we arrived at, namely, 'That phosphate of lime decidedly increased the turnip crop, but that the farmers need not trouble themselves to know whether the phosphates were of animal or mineral origin,' was met by a storm of criticism. A great many experiments, however, have been made and in every case where properly conducted have supported our conclusions. The second conclusion which we four years ago published and have annually repeated is, 'that soluble phosphate is not superior to insoluble phosphate to the extent that is generally supposed.' We are obliged to keep these conclusions in the foreground and to show by our experiments, year by year, the evidence in support of them, because it is felt that there are great difficulties attendant on their acceptance. We have to contend with the teachings implanted during a generation; with the tendency of the masses to be carried away by floods of plausible words; with the custom of farmers to imbibe their notions of manures from manure dealers, and with the opposition of manure dealers or manufacturers, although I am bound to say that regarding the last difficulty, it has not been felt in this neighborhood, as the manure manufacturers in this town and district have been eager to assist in every way the work of the association. I am pleased to see that they are an eminent exception to the trade in other places. When we see the enormous amount of money, which has been taken from the farmer by the erroneous doctrine that insoluble mineral phosphate has little or no agricultural value, the necessity is seen for repeating annually the important latter clause of the first conclusion we arrived at, viz: 'farmers need not trouble themselves to know whether the phosphates are of mineral or animal origin.' The additional drain upon farmers by reason of the other error of ascribing to soluble phosphate twice the manurial value of ground phosphate, enforces us to publish the fact which we find yearly, viz: that the superiority is on the average only about 10 per cent. I hope that at an early day the acceptance of these facts will be general, but until such time we must continue to repeat our conclusions and add to our proofs. We commenced by inquiring into the action of nitrogen and phosphates upon turnips, and guided by the combined results of 180 experiments in five different soils we published our revolutionary conclusions. We then tested these conclusions in a rotation of crops, beginning with turnips; this second crop strengthened our position; oats followed, and as far as phosphates are concerned, much the same results were got as on turnips, while nitrogen showed much greater influence in this crop than in turnips. Now we have the hay crop, and, briefly, our former conclusions as to phosphates are entirely borne out by this crop both as regards the efficacy of mineral and the limitation of the superior efficacy of soluble phosphate to about 10 per cent. And further, we have to report that this crop does not appear to be influenced by phosphates so much as turnips are; not by nitrogen so much as oats are, but apparently hay, in particular the clover of our mixed hay crops, is chiefly influenced by potash. But while to the action of potash and the thorough cultivation of the land no doubt are due the heavy hay crops, these subjects at present can only be lightly touched upon in order to give individual attention to phosphate and nitrogen. I will now allude shortly to our English stations, and first to Huntingdon. Having given the soil first a dressing of those things which we are not investigating (potash, magnesia and sulphate) without giving any phosphate, the crop was 14 tons; on adding phosphate in the various forms no increase was got; soluble phosphate gave results identical with insoluble phosphate; the only increase is by the addition of nitrogen to phosphate, an increase which we may ascribe wholly or in part to water. * * * We are now in a position to state that unduly rapid growth or development of large bulbs, such as are induced by nitrogen and dissolved manures in average seasons, and frequently by dissolved manures alone, is associated with the storing up of extra water in turnips. This may take place to such a degree as to reduce the real value of the crop materially. (Cattle graziers well know that the same thing is true of grass grown in wet seasons on heavily manured land. Cattle never do well on it in consequence of excessive water; a deficiency of the percentage of cream to milk is another index of the same fact.—M. G. E.) * * * * * * Mr. Jaimison has confirmed the opinion that fungus can cause disease in healthy plants, and the important point is now brought out that disease is aggravated or the plant is predisposed to these fungoid attacks by dissolved manures. * * * * * * *

"There are many great commercial bodies in this county and town who are really interested in the thriving condition of the agricultural interest. They should not leave entirely to farmers and proprietors the onus, so to speak, of maintaining this association. I would suggest to such commercial companies, as the banks and railway companies, that they should ask their shareholders to allow them to give a subscription in aid of this association. I see among the list of subscribers some from the manure companies, and it is surely an example which might be followed by some of the great interests which derive benefit from prosperous agriculture."

In presenting the above extracts from this most interesting address I reserve comment. The extracts themselves afford food for the highest reflection, especially for those interested in experiment stations.

M. G. ELLZEY, M. D.

Agricultural Matters in France.

[From our Correspondent in Paris, June 21.]

THE ENSILAGE OF MAIZE has now entered regularly into rotations. But great as are the advantages of this innovation, it is not intended to supersede root crops. It is never considered other than as an aid to spring feeding when mangels and turnips fall short and the soiling is yet too young; it also is a kind of safeguard against short supplies of hay; against dry summers and cold springs. The principle is accepted in France; it is being made known by lecturers and publications. Those who adopt ensilage devote their attention to plans for making it more useful, and also cheap with respect to the silo. In Vendee and the west of France, where cabbage is extensively cultivated, that green crop is being experimented upon. The variety known as *choux moellier* has an excellent reputation: it can weigh as much as 12 lbs. and yields 25 to 33 tons per acre. Mixed with bran, brewers' grains and sliced beet, it promises to make an excellent appetizing food. The roots correct the tendency of the cabbage to flavor the butter. I know a gentleman who prevents his butter from such flavor—produced from feeding his stock principally on cabbage—by adding a little of the finest olive oil to the cream before churning. The same ought to be efficacious in the case of turnip rations. An implement manufacturer has brought out an improved maize chaffer; the machine cuts the green maize from half an inch and upwards as desired; a current of air blows the cuttings through a tube that can be lengthened or lowered at will, like a crane, so as to throw the mass into the silo. The cost of the machine is 750 francs.

THE CROPS AND TARIFFS.—Except for the extending ravages of the phylloxera, French farmers would not have much to complain of this season so far. The grass crop is short and light, but hopes are entertained that the aftermath may turn out well. In any case, intercalary crops are being taken; cereals are well eared and the filling promises fairly. The rains, warm and refreshing, are telling favorably on roots. The beet crop will be a fair average, but the area of land under it will be less than last year. The sugar industry appears to be in a state of confusion: the manufacturers are not opposed to levying the fiscal dues on the roots rather than on the juice, but they demand the government to accord them a bounty in order to hold the market against the German and Russian producers. In the end they may succeed, as have the ship-builders. No farmer complains respecting the customs' dues on live stock being more than doubled; no augmentation will take place respecting grain, but that on flour will be increased. France is free to do as she pleases to protect her interests against the foreigner; only when the latter does the same, she ought not to lecture him on free trade.

PERCHERON HORSES.—It is to be hoped that the tide which has set in of barring out the foreigner will not be applied to the exportation of Percheron horses. Complaints are in the air that the best stallions are bought up by Americans, and the Australians now intend entering the field. A company of Australians purpose establishing breeding and purchasing studs in the departments of Orne, Sarthe and Eure-et-Loire, the best regions of the Percherons. The bus companies and carriers, who are large purchasers, lament the competition which has run up the price of the horses. The breeders cannot subscribe to these narrow views, and if the demand be so brisk, the reason is stronger to augment the production. Not more than 200 Percherons, of which about 130 are stallions, are exported annually.

The local breeders have had a happy thought in converting their annual fair into a kind of yearly show. The first of these gatherings has just been held and the exhibits were very promising. The occasion was seized to found a stud-book to chronicle the blood. It is said Belgium contemplates crossing her draught breeds with the Percheron; probable result, to destroy the good qualities of both, as each have their specialty.

PROGRESS.—French agriculture is making rapid strides; it would walk with something like seven-league boots did the farmers possess any rational system of banking accommodation. An agriculturist is not viewed by the Bank of France as a trader, hence his paper is refused commercial accommodation. There are round-about-ways of coming to the rescue, but they are too dilatory, too uncertain and too costly.

The Italian farmers are a model in this way; they form in each canton a mutual guarantee for one another, and that arranged the popular banks immediately advance the funds, and at a rate of interest not at all of a hampering character. Temporary loans to farmers are useless if not for eighteen months; longer, for permanent improvements. The French farmer must apply to usurers if he has no friends; he can of course mortgage his holding, generally his own property, but the law expenses alone would amount to ten per cent., a two years' interest at five per cent. Such loans ought not to be either more ex-

pensive or more difficult to negotiate than ordinary commercial paper.

SALT is a commodity, next to a necessity, for French farmers; yet it is so heavily taxed, surrounded with so many irritating conditions as to limit its employ. You can not cart a barrel of sea water to your home without permission of the authorities. You would be suspected of wanting to cheat the revenue perhaps by manufacturing your own salt. The tax brings in over three millions of francs annually to the exchequer; better reduce that and make up the deficiency on drink licenses. Mixed with lime salt is beneficial for all crops. It is generally applied at the rate of 3 to 4 cwts. per acre, and is most efficacious, according to Boussingault, when mixed with two-thirds of its weight of lime or marl. Salt exercises a most favorable influence on the formation of the ear of wheat, barley and oats, and adds to the weight of the grain itself. In the case of the potatoes, the action is marked, the soda replacing the potash in that plant; but it is on colza that salt tells with most benefit. For feeding mangels, salt is excellent, but it is detrimental when beet is cultivated for sugar. It was Davy first directed attention to the value of salt in the agricultural point of view. It augments the appetite of stock, and enables the latter to consume acid or inferior herbage. The famous *prés salés* sheep, that command the highest price with the butcher, are fed on the salt marshes of Lower Normandy and the coast of Charente—Inferieure. Mixed with guano and urine, salt prevents the escape of ammonical fumes. M. Velter concluded the ultimate action of salt was to convert organic matters into nitrate of soda. In any case before employing salt the nature of the soil ought to be carefully studied.

PASTEUR'S DISCOVERIES.—M. Pasteur hesitates to give his experiments respecting inoculation against hydrophobia, with virus of rabies itself specially modified, as definite till a government commission report on same, which it will do in the course of a few months. At present scientists seem to be concentrating their attention on microbes, bacteria, bacilli and kindred parasites, as the causes of all contagious maladies in the animal kingdom. So far as Pasteur has operated for the *charbon*, that is a success beyond yea or nay, the only point farmers differ about is the duration of the anti-vaccine preventive. The foot and mouth disease is being well studied at the Alfort Veterinary College, and M. Bonley may be able in the autumn to make known the result of his inquiries conducted on the Pasteur lines.

ITEMS.—Bee culture is not satisfactorily spoken of this season. An insufficiency of flowers, or too many swarms are set down as the causes. The Lyons farmers complain of having lost one-third of their hives.

Siberian oats have turned out magnificently this spring, and so they will become more than ever in favor. Spring is preferred to autumn sowings.

The agricultural budget will be wickedly defended this year against further reductions. It is a strange fatality that agriculture is ever the last to benefit by remission of imposts, the first to be promised all ameliorations and the earliest to be struck with fresh charges the moment the nation wants money. No wonder farmers are ever discontented in France; perhaps the history can be paralleled elsewhere. Only think that the subventions paid to the theatres are three times greater than the amount voted for agriculture; the grant allowed to the National Opera alone is more than double the amount voted for regional farm shows and agricultural societies.

What are call *fruitieres*, or co-operative cheese farming, is about being applied to butter. This will enable the associated farmers to have a uniform brand for a common product, which, being recognized as sound and unadulterated, will secure them collectively a more remunerative price. Why ought not the principle of co-operation to be carried farther so as to lessen cost of production? There is a great future in the question.

France possesses some millions of acres of *kumes* or loosely-bound, sandy soils. Genet or broom is the plant to which recourse is had as the ameliorative agent. The genet is cut regularly and the branches allowed to decompose in the furrows where they augment the layer of humus by their decomposition. In Belgium, genet enters into a three-crop rotation on loose, sandy soils. The latter receive same manure, are sown with oats, clover and genet; the oats pay merely the expenses. This rotation in the course of some years gives a "skin" to the soil. In the Cevennes, sheep are fed in summer on the young branches of the genet, and in winter on its dried leaves. In Spain, when the shrub attains 30 feet high it is cut down, the land broken up and sown with maize or Turkey wheat; in the Alps, genet is employed as litter; across the Alps, at Pisa, it is steeped like flax or hemp and made into coarse cordage; ordinarily, it is sown with oats, after the latter is harrowed in; 12 lbs. of seed to acre, scattered and left bare. It gives three cuttings in the season and is succeeded, after three years, by clover, oats or buckwheat.

Deer Creek Farmers' Club.

A NEW WAY OF PLANTING CORN—RUTS.

The Deer Creek Farmers' Club met July 5th, at the residence of Judge Watters, Thomas' Run. In the absence of the President Mr. John Moores was called to the chair. Messrs. Webster, Archer and James Lee were appointed to report upon the condition of the farm and buildings. They complimented Judge Watters upon the appearance of his farm and stock. An experiment in corn-planting was examined with interest. Judge Watters has his corn planted in double rows 18 inches apart, with 5½ feet spaces between the double rows. The ground thus contains the same number of rows as in the usual method of making the rows 3½ feet apart. The advantage claimed is that the wide spaces allow a free circulation of air among the corn, which is believed to be of great advantage. The corn is worked with a peculiarly-shaped cultivator of Judge Watters' own invention. He tried the experiment last year, with such good results as to induce him to put in his entire crop by the new method this year. Immediately after cutting his clover Judge Watters hauled out all the manure from his barnyard, spreading it evenly over the field. Now the second crop of clover has almost hidden the manure. The committee thought the plan a good one. Judge Watters has some fine short horn cattle. All of his stock, indeed, look well. He also has a good truck patch, a matter too often neglected by farmers. Since the club met there before Judge Watters has made an addition to his farm, greatly improving it.

The topic for discussion was "Ruts." We are indebted to the *Aegis* for our report. Judge Watters said that the subject was suggestive, and while not so well suited for general discussion was a good one to think about. He had prepared what he had to say in the form of a short essay, which he read, and from which we take the following extracts:

"It is said that an ostrich hatches its egg by standing off and looking at it. Whether this be fact or fable, it illustrates the idea which was in my mind when I suggested this subject for our talk this evening. It is profitable for us at times to stand off and look at our work. The work of intelligent beings should show the true measure of their intelligence. Our methods should be adapted to the attainment of desired results and we should constantly bear in mind that the laws of nature are harmonious, and that every fact, no matter how insignificant it may seem in itself, must have its true relations to those laws, and if properly understood may serve as a key in our hands. We have to do with problems containing many unknown quantities and we cannot hope to eliminate them all, or any considerable number. The field is infinite and we can never hope to reach a point at which the horizon will not seem as far in advance of us as it was at the start; but this is no reason why we should stand still or follow blindly in the ruts which others have made. Ideas do not come into this world full fledged any more than young ostriches. Germs of thought require incubation as well as the embryo in the egg, and the growth and development of the one is fully as wonderful as the other. If examples are needed we can scarcely go amiss for them. Take the steam engine, the most wonderful mechanical outgrowth of modern times, and we need not go far back to find the germ of it in a tea kettle, with a boy standing off looking at it. It is James Watt incubating an idea. We can hardly realize that the patient, obedient giant which does our bidding so faithfully had such a hatching. * * * *

"The disposition to get into ruts is not by any means peculiar to farmers, as we find it in all callings and professions, but certainly there is nothing more inimical to advancement. When we come to a community where the more ignorant are content to follow blindly and unthinkingly in the ways of their fathers and grandfathers, and where those who are educated delight in quoting Virgil's Georgics as an agricultural authority, we may be sure we have found a good place to move away from It is a very common remark in regard to young men who go to the far West that if they would use the same energy and submit to the same privations at home, they would meet the same success here that they do in the West. But that "if" is just where the rub comes. In a community where everything moves in ruts it is no easy thing for an individual to get out of them or to keep out. No doubt one of the great attractions in the West, and probably one of the causes of its rapid advancement, lies in the fact that each individual in breaking up his old home and leaving his old associates gets out of his old ruts, and then meeting with those who have come together from every quarter of the globe he has no chance to get back again. It is better to run the risk of being buried by an earthquake or swept away in a cyclone than to have one's energies exhausted and his manhood smothered out of him in a labyrinth of old ruts that end no where and lead no whither.

"It cannot be denied that the present century has witnessed the filling up of many an old-time rut. The discovery of steam-power and of the electric telegraph have given the world a stirring up from which even farmers have not escaped. The introduction of improved machinery to do farm work has revolutionized many of our methods. The advantages of a more general education and a great improvement in the quality as well as in the quantity of farming literature have assisted greatly in the work, and it is not unreasonable to hope that the period in which we are living will mark an epoch in the history of agricultural advancement.

The four quarters of the earth have been brought very close together in these latter days and competition has been proportionately quickened. It behooves us to keep our wits about us and see to it that we are not left out in the cold before we know it. We should be able to say to our young men, 'stay with us and we will help to obliterate the old ruts which impede your progress and ours.' We should be able to assure those who are looking toward us from a distance that if they will come and cast their lot with us we will not be hinderers but co-laborers with them in a common effort to advance a common interest.

"If I were asked to name the greatest obstacle in the way of farmers I should say, without hesitation, 'Ruts.' If I were asked to give the best reason for the existence of Farmers' Clubs I should say 'to fight against ruts.'"

R. Harris Archer thought it was sometimes dangerous to get out of the well-known beaten paths along which others had gone successfully. It was well, he thought, for men with money to make experiments.

Johns H. Janney thought farmers should not keep in the same old ruts their fathers travelled in. Agriculture is an undiscovered science and it is the duty of every farmer to make experiments for the benefit of his brother farmers. One old rut that farmers should get out of is that the dull boys should be kept on the farm and the smart ones be sent to the cities.

Benjamin Silver, Jr, said this is an age of progress and farmers are getting out of old ruts perhaps fast enough. He could see the greatest improvement in the last ten or fifteen years. Work is better done and you see cleaner corn fields. He did not believe in doing or not doing a thing because our fathers did or did not do it, but if a man can make more money by staying in a rut a rut, let him stay there.

Wm. Munnikhuysen said farmers should keep their eyes open and get out of ruts whenever they could see that it was to their advantage.

Wm. Webster said that Walker, Worcester and the other Webster defined a rut to be a well beaten track. He did not see why we should leave all beaten tracks if we found them successful. If he had doubts about the rut he would try a new one, on a small scale. The trouble is that farmers theorize more than they practice. It requires as much brains as muscle to farm successfully. The farmer who has both succeeds best. There are two ruts in which farmers of the present day have gotten. We are extravagant in the expenditure of money and the improved machinery has made farmers careless about many things. Our fathers did not go in these ruts.

Geo. E. Silver thought some ruts could be followed profitably while others should be avoided. There are some general fixed principles which are as essential to farming to-day as they were years ago. These may be called ruts, and it is not safe to leave them. We seem to be following an old rut by having everything hauled to a distant depot from Deer Creek and Thomas' Run. A railroad through this country would move us out of that rut.

E. M. Allen said that if our fathers had pursued ruts which they found advantageous he would stick to them.

James H. Ball said he would like to hear some ruts specified which ought to be followed or avoided. For instance, Judge Watters had spread manure on his newly-cut clover-field. Our fathers would have thought it wasted. That is one rut we should get out of. Corn is cultivated 50 per cent. better and cheaper, too, than it was 40 years ago.

Thos. A. Hays said many old ruts should be abandoned and a few continued in. Among the former was the practice of making roads up the hills and along line fences, and the use of old fashioned machinery. You are in an old rut when you undertake to cut 30 or 40 acres of wheat with cradles instead of a binder, or work 30 or 40 acres of corn with hoes instead of sulky cultiva-

tors. There is comfort in working with improved machinery. It saves labor and sweat, and the ruts may be smoothed over by using it.

S. B. Silver said it was a trait of human nature to be impressed by the example of others and to follow in the procession without taking advantage of the results of our own observation and experience.

James Lee believed in getting out of ruts. Nine times out of ten we will succeed better by a change. If a system were successful he would not call it a rut.

Judge Watters—Using a cradle would be a rut if a man had at his command other and better means for cutting wheat. If he continued to use the cradle merely because his father used it he would be in a rut. If we go on raising certain crops and getting in debt because our fathers raised them, that is getting in a rut.

Rev. C. D. Wilson said that for farmers as well as for others there are extremes of conservatism as well as of radicalism, but there must be progress. We have a right to use the wisdom of others behind us as well as our own wisdom and experience. One piece of mechanism serves its day and something else takes its place. We can't be slaves to the past, but we cannot afford to give it up. We should use the best of the past and reject the rest.

John Moores said there are ruts which no sensible man would follow. We are apt to see the ruts followed by others, while we cannot see those in which we travel ourselves. Walking from the house of a friend to his barn, he observed that the path was exceedingly crooked. Upon looking for the cause, he saw a cart standing in a certain place, and, to avoid this, the path to the barn had been made twenty steps longer than necessary. He pointed it out to his friend, who said he had been accustomed for years to leave the cart in that particular place. By moving it fifteen or twenty feet aside much time could have been saved in all those years. There are little ruts like this about every farm, which should be avoided. In farm roads and laying out fields, also, many well-worn ruts might be avoided with profit.

E. M. Allen said that two ruts which might be avoided were fencing and rotation of crops. Fencing is made more expensive than it should be, and it has been found that rotation of crops is not necessary.

Adjourned, to meet at William Munnikhuysen's, Saturday, August 2d. Question: "How to farm economically."

Plaster for Moisture.

Plaster (sulphate of lime), says *Farm, Field and Fireside*, is a mineral which it partially soluble in water. It has great affinity for moisture, and therefore makes a splendid fertilizer in the dry season. It answers well on grass, and especially clover, while for turnips it affords great assistance, that crop usually being subjected to the hot, dry days of July and August. Plaster is rather more stimulating than some fertilizers. Its principal ingredient is lime, the sulphuric acid (which is united to lime) being set free in the soil, thereby hastening chemical action on other elements and furnishing plant food from other sources than itself. One of the greatest advantages arising from the use of plaster is its power of assisting to attract nitrogen. Whether it does so by direct union of its acid with ammonia or by the agency of moisture, which absorbs moisture, is not clearly understood, but its use gives all plants upon which it is applied a greener tinge, which is strong evidence of its value as a fertilizer.

All manures deposited by nature are left on or near the surface. The whole tendency of manure is to go down into the soil rather than to rise from it. There is probably very little if any loss of nitrogen from evaporation of manure unless it is put in piles so as to ferment. Rains and dews return to the soil as much ammonia in a year as is carried off in the atmosphere.

Recurring Fertilising of Corn.

From the habit of its root growth, which has been noticed in these columns from time to time, it is reasonable to assume that corn may be usefully fertilized at frequent intervals during its period of culture. That this assumption is justified, several years' practice of what may be called recurring fertilizing has proved very satisfactorily. As the roots of corn spread very near the surface, and as soluble fertilizers become diffused through the soil with surprising rapidity, it is possible to feed this crop just as one might feed an animal in the process of fattening—to really fatten it, in fact, by giving it an excess of food. It is in this way that all the large crops of corn have been grown, the largest on record having been grown in Ohio, amounting to 240 bushels shelled grain to the acre, and it was in this way that we have grown up to 150¼ bushels of grain to the acre on a plot of one-sixth of an acre and 98 bushels per acre on a field of several acres. Last year, with a new corn, known as Pride of the North or Queen of the Prairie, and fertilized in this way, the yield was a little over 80 bushels to the acre.

This system of sowing corn was first practiced by the writer seven years ago, and was adopted for the following reasons, viz.: 1. That when all the manure and fertilizer is given at the start to the crop, the growth is forced unhealthfully and in a wrong direction, the stalk and leaf being developed instead of the seed. Besides, the plants are very much more subject to smut, in some cases being grossly deformed and wholly spoiled by large excrescences of this fungus upon the stem and leaves, and even upon the surface roots at the base of the stalk. 2. That, as the roots are able to take up food at a few hours' notice and as soon as it has been dissolved and diffused in the soil, it is better to distribute the fertilizer at short intervals as fast as the roots can take it up, and also to use such fertilizer as is quickly soluble, and will supply all the elements that the plant requires. 3. That, as the roots of the plants are known to spread all over the spaces between the rows, it is best to scatter the fertilizer on the surface broadcast, either immediately before or directly after the cultivator or horse hoe has been used; and 4, That, as the growth of the plant is hastened by frequent cultivation, it is well to do this at least once a week and at each time to apply a small quantity of fertilizer.

It is apparent that there is an analogy between feeding a crop of corn and feeding an animal. As we could not expect to succeed by giving a pig or a steer an excess of food at one time and then stop, so we cannot expect to grow a maximum crop of any kind by crowding the food on to it at the start and then leaving it to do the best it can with it. As an animal will thrive best with frequent and regular rations, so a plant will. The prize melons and cabbages exhibited at the fairs are produced precisely as the prize geese and turkeys and the fattest pigs are. The vegetables are fed daily with liquid manure, which is their food, and the animals are supplied upon the same system. And, if we wish to emulate the grower of the mammoth pumpkins in regard to our crops, we must follow his method as far as may be practicable. In the case of our own crop of 25 bushels and 8 pounds of corn on one-sixth of an acre, it was cultivated weekly. At the planting 50 pounds of the special corn fertilizer was applied broadcast, and 10 pounds more was used at five different times, the last being when the silk was drying up and the corn was beginning to form. Perhaps one or two more applications after that might have enabled the ears to fill out better. This method of culture is equally applicable to potatoes, melons, beets and even to grass and grain crops, the latter, of course, being merely top-dressed and not cultivated.—*Cor. Times.*

Live Stock.

The Live Stock Business of the Country.

This branch of business has grown to enormous proportions in the United States, and the facts presented in the following statements made by the *Breeders' Gazette*, compiled from actual sales, show that the future is destined to be of still greater proportions. The figures given, be it remembered, are for thoroughbred cattle alone, sold at public auction for breeding purposes. The result shows that 4,510 head of Shorthorns, Herefords, Angus, Galloways, Jerseys, Guernseys and Holsteins have passed in review before these knights of the block, as shown by files of *The Gazette* from January 1st to July 1st, the total sum paid for the same reaching the gigantic total of $1,233,335. When it is remembered that this refers simply to cattle sold at auction, and the majority of them disposed of inside of ninety days, no reference being made to private transactions, some conception may be had of the magnitude of the trade in improved live stock in America.

Of the cattle thus disposed of, 2,335 have been thoroughbred Shorthorns which, as compared with the whole number sold, illustrates the importance of that branch of our cattle-growing industry; their wide distribution, the figures at which good specimens may be had, and the wide adaptability of the breed to different conditions, combining to render the red, white and roan a popular favorite. These 2,335 head of cattle brought their owners a total of $489,283, an average of $209.55 on big and little, old and young, with many of the sales occuring under unfavorable conditions. As compared with the general average on Shorthorns for the year 1883 ($205.56), and the averages obtained for several years preceding (which were considerably lower), this is full of encouragement to the breeders of this race of cattle. We have attended a large number of these sales and have not seen a good animal of desirable breeding sell at a sacrifice during the entire series. The Bates families still sell at high prices, but the greatest advance is to be noted in good specimens of such old reliable sorts, as Marys, Rose of Sharons, Phyllises, and others decended from the early Ohio and Kentucky importations. When these sorts are topped out with bulls concerning the purity of which there is no question, and present good individual merit, they are in strong demand. There is a continued inquiry at high prices for good animals of Scotch breeding. Fewer of this sort have been on the market than last year, and private transactions indicate a still further advance in choice stock of that character. In general it may be said that all good heifers of approved breeding are quite firmly held; young bulls have perhaps not met with quite such ready sale as in some former years; a free supply and some apathy on the part of ranchmen being mentioned as probable causes.

In point of numbers sold the Jersey ranks next; no less than 1,559 head having been put upon the market, the total realized for which was $535,071—over a cool half million—an average of $343.21. This is something of a reduction from last year's average, but no lack of interest is necessarily indicated thereby. Jersey breeders and importers are perhaps to a greater degree than any other class influenced by financial flurries in the great moneyed centres; a large proportion of them having large investments in various commercial enterprises. The absence of that warm competition among the leading Jersey fanciers which characterized several of last year's sales may, however, in the end prove for the best, as it enabled many who felt indisposed to pay the long prices sometimes given to come into the market and lay the foundation for good herds at prices which are almost certain to insure good returns in the future. A remarkably large percentage of bull calves has also attended the calving season for a year or more in a majority of the Jersey herds, causing a glut in the market for young male stock. It may be worthy of note that one of the latest extensive sales, that of T. S. Cooper, shows an improvement in the general tone. Furthermore, the highest price of the year so far as reported, for any animal of any breed at private sale, was $15,000, paid by the late Mr. S. M. Shoemaker for the bull Black Prince of Linden. The great performance of Mr. V. E. Fuller's Mary Anne of St. Lambert imparted great strength to the values of all cattle of similar breeding offered.

Aberdeen-Angus breeders have had to submit to a reduction in values at public auction, but are receiving at private treaty figures closely approximating those current in 1883. They are largely in strong hands, and as their owners have every confidence in their future, no further decline is expected by those best qualified to form a correct judgment. About 155 head have been publicly sold for $54,190; an average of $350. In common with all the beef breeds, they have felt the absence of the ranchmen from the market. A feeling of distrust supervened after the "foot-and-mouth" scare, which, together with the stringency in the money market, has lent a conservative tone to the Western cattle trade.

Galloways have sold to the extent of about 141 head for $43,770; an average of $312; having been subject to the same depressing influences as the Angus. We do not know that we have reports from all the Western sales of polled cattle, but think the figures given practically cover the ground.

Herefords have been rather sparingly offered; 117 head bringing $45,225; an average of $386.50, as against $476.61 last year. Few really first-class lots have been on the market, however, and it may be safely stated that choice "whitefaces" are selling quite as high as ever.

Holsteins have gone by the block but twice; once at the Stillwell sale in Ohio, and again at the late Smith sale at Iowa City. On these occasions 100 head brought $38,215; an average of $382.15. This is probably below the mark made privately for the better grades.

Guernseys have been offered but once, at the late Philadelphia sale, when 103 head brought $27,580, an average of about $268.

The results above noted may be summarized as follows:

2,335 Shorthorns sold for $489,283; an average of $209.55

1,559 Jerseys sold for $535,071; an average of $343.21.

155 Aberdeen-Angus sold for $54,190; an average of $350.

141 Galloways sold for $43,370; an average of $312.

117 Herefords sold for $45,225; an average of $386.50.

100 Holsteins sold for $38,215; an average of $382.15.

103 Guernseys sold for $27,580; an average of $268.

The above certainly affords ground for renewed confidence in the business of breeding and rearing the improved breeds of cattle, especially as values have been so well sustained and in some cases advanced in the face of a threatened financial storm. These results having been accomplished is there not reason to feel safe, for the immediate future at least, with an apparently abundant harvest at hand?

If too much corn is fed to a horse he will become hot, fat and slow. Corn fed in great abundance is likely to produce indigestion. Where horses are at work and cannot be allowed to run in pasture, and where, as in some parts of the country, much corn is fed, laxative food should be supplied to counteract the binding effects of concentrated food. Do not feed your horse a heavy amount of hay early in the day and then expect him to work hard or drive well.—*Ex.*

The Fattening of Hogs.

By R. PURYEAR, LL. D., Professor of Chemistry in Richmond College.

It is the part of a good farmer to conduct all his operations on the best and least expensive plans. His chief profits arise from doing things well and in avoiding unnecessary expense. In the matter of fattening hogs, there is abundant room for the application of these ideas.

(1). The most important step is to commence the process in the early fall. Hogs ought always to be ready for the knife as soon as the weather is cold enough for salting and curing pork. At the very latest the whole process ought to be over before Christmas. Hogs, as other animals, fatten slowly and with a much greater consumption of food, after the hard weather of winter sets in. The animal system is a stove, a locomotive, a self-regulating stove. The function of the larger part of food is simply to furnish fuel to keep up this internal fire. How cold, soever, the weather, the temperature of the body must be kept at the normal point of 98 degrees. If food be not furnished in sufficient abundance, the fat of the animal is burned off in the internal fire to maintain this constant temperature. The colder the weather, therefore, the more rapid is the loss of heat from the body, and hence is necessary a much larger consumption of food to prevent a fall of temperature. A barrel of corn in October will put as much fat on a hog as two barrels in January. In October so much of the oily matter of the corn is burned off as is necessary to generate the small amount of heat lost from the body during the mild autumnal weather; the balance is assimilated and becomes the fat of the hog. In January, the loss of heat from the body is vastly greater, and as much food must be burned off as is necessary to generate an amount of heat equal to this greater loss. To state the doctrine in general terms, in mild weather the loss of heat from the animal body is small, and only a small part of the food is burned off to make good this loss; in hard weather, the loss of heat is greater, and a greater part of the food is burned off for keeping the temperature at the normal point.

(2.) For fattening purposes, no food is so good as corn. It is richer in oily matter than any other cereal, or any other vegetable matter that is likely to be furnished to hogs for food. It contains about ten per cent. of oily matter; peas contain only two per cent. In fattening properties, therefore, it is much superior to peas. But in one respect peas have a decided advantage over corn. While corn contains sixteen per cent. of nitrogenous compounds—muscle-forming material—peas contain twenty-four per cent., or fifty per cent. more than corn. If our object is simply to fatten the hog, no food is so good as corn; if the hog is young, and we wish him to grow and fatten at the same time, the indication is a mixed feed of corn and peas. The corn will put on fat rapidly, and form muscles slowly; the peas will form muscles rapidly and put on fat slowly. If the young hog, therefore, is fed on peas and corn, the peas will rapidly form the muscles and the corn as rapidly pile on the fat.

I once tested this principle with results that were surprisingly satisfactory. I had some fifteen hogs for killing that were under a year old. I knew that they ought to grow more, but I did not wish to keep them for the next year. My plan was to boil peas until quite soft, and then, while the water was hot, to stiffen the contents of the pot with corn meal. This mixture was fed to the hogs, in suitable troughs, as it cooled to a tepid temperature. My average gain on each hog, as compared with a diet of corn which had been furnished in former years, was eighty pounds, while the cost of this mixed food was a third less. The result was due chiefly to the large muscle-forming compound of the peas, and the large fat-forming compound of the corn. The hogs grew and fattened, *pari passu* There is, however, another factor in the result. The digestion and assimilation was perfect. No unreduced material was voided in the excrements. There was no waste. In feeding corn the waste is great, both in the corn not eaten and in the larger amount that passes unreduced through the intestines. I soon found out their exact capacity for this food, and gave them what they could eat and no more. Hence the large diminution of expense to which I have already referred.

(3). A modifying circumstance, of the highest importance in the fattening of animals, is physical and mental quiescence. Physical activity increases the frequency and depth of the respirations and accelerates the flow of blood, which is charged, as it passes through the lungs, with atmospheric oxygen. This destructive element, being introduced more largely as the result of muscular activity, burns out the fat and hydrocarbons of the food. Mental activity acts in about the same way. Whatever excites and disturbs an animal makes the heart beat faster, and so sends the blood, always charged with oxygen, more rapidly through the system.

An animal, therefore, that will bear confinement without grieving for its loss of liberty, will fatten the more rapidly on account of the confinement. The flow of blood is slow and sluggish, the quantity of oxygen introduced is small, the combustion of the fat of the animal or of his food goes on at a languid rate. The ox soon learns to love the stall and the trough where all his wants are supplied, forgetting the freedom with which of late he roamed the field and cropped the grass; and as fat accumulates it burdens the animal and increases his disposition to inactivity. Hence animals take on fat at an increasing rate after they have begun to fatten.

The hog is an unambitious animal. He is of the earth, earthy. There is no "speculation in his eye." With free access to water, and with corn in abundance, he is content and undisturbed, and soon declines the exercise, which daily becomes more burdensome and distasteful. The fatter he becomes, the more rapidly he takes on fat. The conditions favorable to the formation of fat are getting better every day. Fat is an excellent non-conductor of heat, and as it thickens on his ribs, there is less loss of heat from his body, and hence less and less of his food is needed to generate heat, and more and more is available for the formation of fat. To kill hogs, therefore, before they are well fatted is wasteful, because each pound assimilated makes the assimilation easier of the next pound.

I do not think that in fattening hogs they should be too closely confined. They are rendered uncomfortable and they suffer from lack of cleanliness. A hog will keep himself in a cleanly, presentable condition if he is allowed to do so. Give them sufficient freedom of motion, which they will use less and less as they grow fat.

To sow peas for hogs is one of the cheapest methods of starting the fattening process, which is to come on fully a little later. Turned into a pea field in September, they grow rapidly, fatten considerably and are put into the best condition for deriving the greatest possible benefit from the diet of corn which is next to follow.

AN authority says it is always best to feed a variety of food in the ration of a horse. As a simple food, oats are best; but oats and corn are still better, and oats, corn and barley better still. And whatever other food, one pint of linseed meal per day to a horse will be found to pay well in health and condition. One of the best combinations as a food for horses is 800 lbs. of corn, 800 lbs. of oats, and 100 lbs. of flax seed, evenly mixed and all ground together.

The Wool Outlook.

The Texas *Wool Grower* says: "The result of the wool growers' meeting at Chicago was the same as could of right be expected. The resolutions as passed and carried by acclamation will be endorsed by all sheep raisers having a desire to continue in the business, and the firm stand taken will gain the respect of political parties.

A correspondment of the same journal, remarks upon the difficulties which the wool growers of that state have had to encounter in the winter and spring of 1882, by the storms and floods, &c., just at a time when they were least prepared for them. It utterly annihilated some flockmasters, and demoralized others so that they have never been able to recuperate. "There (he added,) are a few of the embarrassments which the wool industry of Texas has had to encounter from its incipiency, but notwithstanding all these it has gone steadily along in the way of development, and to day holds a respectable rank among the leading industries of the state. Does the wool grower see anything discouraging in this? Surely the future looks more promising than the past has been. Why? First, he has his sheep already graded up, and is now prepared to complete for prices in all the great wool marts of the east. Second, he understands the business and is prepared for it. He has learned the useful lesson that fine sheep are tender animals and require tender care. Five years ago there was hardly a sheep shed to be seen in the state, now they are to be seen on every well regulated ranch. While the wool grower clamors for protection, his flocks demand it as a *sine qua non* to their existence. Third, the prejudices heretofore existing between cattle and sheepmen have in a great measure died out, much to the chagrin of the former, they having learned that Texas and the fullness thereof does not belong to them exclusively. Fourth, by the defeat of the Morrison bill a quietus has been put upon the tariff question, for a while at least, and flockmasters can now figure on their probable changes in the market with some degree of certainty. Fifth, flockmasters now own the lands they occupy, as a general thing, and have them enclosed, so that they can manage their flocks according to their own liking without fear of molestation from neighbors who may chance to have more money than they.

Taking this view of the case, I can see nothing in the near future to excite those alarms which some profess to see, but on the contrary the wool grower in Texas is just now prepared to realize handsome profits from his investments.

It is true that under the present financial crisis that is brooding over all the industries of the country, he may not get as much for his wool by a few cents per pound as he would like to get, and he may never look for that day to come in any business, but these things cannot last always, and if he will nurse his business closely and guard well the odds and ends, he is almost sure to realize a handsome profit from his investment at the close of each year. No man ever saw a cloud that did not break away and show a beautiful bright clear sky behind it some day, and so it will be with the cloud that has been hovering over the sheep business for the last few years. The defeat of the Morrison bill in congress is one big break in the cloud and there is more to follow. Such an industry as the wool industry has grown to be, is sure not to be neglected by the wisdom of the country. It may suffer violence from the hands of its enemies from time to time like everything else that is great and good does, but it will come out ahead on the home stretch. There is millions in it. Stick by it and the prize is yours. A faint heart never wins. To the honest and the brave the victory belongs.

Sheep for Eastern Truck Farms.

Sheep feeding produces one of the very best manures made from our domestic animals, its richness depending, of course, upon the richness of the food. And in producing manure upon such a farm, little reliance will be placed for food upon the crops except for coarse fodder. Any rich, concentrated food may be profitably purchased that will be barely paid for in the growth and improvement of the sheep, as this would give the manure as profit, which must be abundantly satisfactory. This enables the truck farmer to keep any number of sheep required to produce the necessary manure, since, if he can purchase the food to produce the manure for a less expenditure than he can buy the manure, he has saved money by feeding.

Nearly one-half of these truck farms is usually resting or laid down to grass and clover. Some regard clover as the best crop for the years of rest, it being a deep-rooting plant, which brings up the virtues of the sub-soil. We think orchard grass and clover a good combination, and it will also produce a large amount of fodder for sheep. Sheep will also eat many weeds when green, and the garden farm would produce a great deal of this kind of fodder. Some, also, of the garden crops will furnish much fodder—for instance, sweet corn and peas. The sweet cornstalk is green and succulent when the corn is picked for market, as, also, the vines of peas. As the truck farmer feeds these sheep to obtain rich manure, he will purchase grain and concentrated food, which, besides producing rapid animal growth, will afford the best manure.—*Nat. Live-Stock Jour.*

Interfering Horses.

Many horses are in the habit of striking with one leg against another; and much of ingenuity has been exercised to provide a remedy for the troublesome practice. Both the fore and hind legs are subject to it, the later, perhaps most frequently; but in them it is confined to the fetlock joint, whereas in the fore legs, the horse may hit either the fetlock, the leg just above the pastern, or just under the knee, where it is called a speedly cut, from its occuring chiefly in fast action.

It is desirable, before applying a remedy to ascertain, if possible, the cause and the part which strikes; whether the shoe or the foot, and, if the latter, what part of it. Many horses strike from weakness, and cease to do so when they gain strength and condition. This is more particularly the case with young horses; others cut from a faulty conformation of the limbs, which are somtimes too close to each other; again the toe is turned too much out or in. When turned in, the strike is usually just under the knee.

The objects to be kept in view in shoeing such horses must be to remedy the faulty action, and to remove, if possible, the part which strikes, which is generally that portion of the foot between the toe and the inside quarter—sometimes the inside quarter itself, but very rarely the heels of the shoe. If the horse turns his toe in, in all probability he wears the inside of the shoe most; if so, it should be made much thicker than the outside; if the contrary, the outside heel should be the thicker. The shoe should be leveled off on the inside quarter, which should also be free from nails.

In the hind legs we often find a three-quarters shoe will prevent striking, when other plans fail, for here the striking part is not so far forward as in the fore legs so that the removal of the iron altogether from the inside quarter will often accomplish the aim. It sometimes happens that no plan will prevent interfering, and then the only recourse is the boot or the pad.—*Indiana Farmer.*

The Dairy.

The Family Cow in Midsummer.

On farms where the dairy is an important part of the husbandry, provision is made by sowing soiling crops, to supplement the diminished pasturage in midsummer. Those who keep only the "family cow," or at most, two or three cows, find the flow of milk to decrease, and often without any green crop provided for keeping it up. The territory of those who keep a single cow, is often restricted to a small pasture and a vegetable garden. The garden should be made to supplement the pasture, and this may be done to some extent by securing for the cow much from the garden that usually goes to waste. Every one who has a garden, tries to have an abundance of green peas. After the vines have yielded their last profitable picking, instead of allowing them to remain upon the ground until that is wanted for another crop, feed the vines to the cow while they are still green and succulent. So with sweet corn. When the last year is plucked from a stalk or a hill, do not wait until the whole patch or row can be cleared, but pull up the stalks that have been deprived of ears, a few at a time, and feed them while in their best condition. The outer leaves of early cabbages, and the leaves of beets, carrots, and turnips, carefully saved, will make an important item in the succulent food for the cow. If there is a space in the garden, from which an early crop has been removed, and it is not needed for a late garden crop, it should be growing something for the cow. Sweet corn may be sown thickly in rows for "fodder corn," and afford welcome feed. It is well to have an abundance of cabbage plants of a large late variety, and set them out wherever there is room, and far beyond the needs of the family. An occasional cabbage next winter will be a treat to the cow.

Experiments made a dozen years ago with some twenty varieties of the Southern Cow Pea showed, incidentally, that, even at the North, if they did not ripen their seeds, they would give an enormous weight of herbage upon a small area. This pea is highly valued for animals at the South, both fresh and as hay, and seems to be worth trying in Northern localities, as a soiling plant. Where there is room, even a few square yards, it may be well to sow either Hungarian grass, or one of the plants called Millet, for late summer feed for the cow. If the soil is rich, an abundant crop may be cut. Besides summer feed in the garden, if there is room there or elsewhere, it is well to think of Jerusalem Artichokes as a winter treat. It is late now for a large crop, but with the tops, which are highly relished, the tubers, being crisp, succulent and highly nutritious, will be most acceptable as an addition to dry fodder. When one once fairly undertakes to produce the greatest possible amount of cow food from a small area of land, he will be surprised at the results that he obtains, especially those seen in the pail.—*American Agriculturist.*

The Dairy in England.

A. B. Allen, in a note to the *Stock Journal* says, that a majority of English farmers seem to be coming to the conclusion, that the dairy is soon likely to be their most important interest, especially in the production and sale of milk. Grain, butter, cheese, and meats of all kinds can be cheaply imported from the most distant foreign countries; not so with milk, and the bulky articles, such as grass, hay, and roots, most necessary for the sustenance of their animals, to produce it in abundance. As milk of a good quality can be profitably furnished the people of towns and cities at a moderate price now, its consumption is rapidly increasing throughout the United Kingdom. This has stirred up the farmers to cast about and ascertain what breed of cows will be the most profitable for them to keep.

All have been pretty thoroughly tried for a long time past, and it seems to be settled again, as heretofore, that the *Short-horn* is the best in the long run, where there is abundant feed, as is generally the case in so excellent a grass and root-growing country. The Ayrshire, Red Polled, and little Kerry cows are best for milk on short pastures, while all four of the above and some others are famous for cheese; nor is their milk deficient for butter, although the Channel Island cows excel them in this respect.

Numerous meetings are held throughout the United Kingdom for the discussion of dairy interest, and how best to promote them. Analyses of the milk of most of the various breeds of cows are made, the different kinds and quantity of food consumed are given, and the relative profit derived from them.

Experience With Jerseys.

A corrospondent of the *Breeders' Gazette* gives his, as follows: We have milked ten cows and heifers this winter; three of them calved in October, two in July, the other five in May and June. We feed hay and ship-stuff. The grain costs us from $25 to $28 per month, the hay $7 a ton. The sales of butter averaged $104 per month; this does not include what milk or butter we use in our family, which will average six persons. These animals are Jerseys. I have had experience with other breeds of milk stock; but it was not such as was desired; I gave them the same care that I now give the Jerseys, but they did not more than pay expenses. They would make from 90 to 120 pounds of butter to the cow per year, and this would sell for 10, 15, and 20 cents per pound, according to the demand.

If you have a good cow of any breed you have a good thing, even if it is a Jersey. Years ago I bought my first Jersey cow—it was an experiment; but it was to please my wife, for she had become a believer in the fawn beauties; but my taste ran in quite another direction, and I would not yield my opinion. It was my purpose never to own another, and I would cleave to it in spite of everything. But oh, I did yield, and added till I now have fifty head, and want a hundred. So much for experience. Every farmer should own one good Jersey cow, at least; it will do more to convince him than all the theories ever published in regard to them—more than all the partial praise of their most enthusiastic friends, or the published tests of all the Mary Annes in all the land. "Prove all things, hold fast to that which is good," and that includes a Jersey cow with me, and should with every man who keeps a cow.

Poultry Yard.

Poultry Raising.

[Read by Sister E. C. Ditty, before All Hallows Grange, No. 14, June 28, 1884.]

Having several times been requested to give my mode of poultry raising, and feeling that one of the greatest advantages of the Grange is an interchange of ideas relating to our various duties, I willingly contribute what knowledge of the subject experience has given me.

I will just state, I attribute immunity from disease in my flock entirely to the free use of lime and carbolic acid, and my mode of using these two articles I shall presently state. I will commence with the fall of '84 and tell the sisters what I intend to do, and if they will proceed with me through the winter, spring and summer, I feel confident success will crown their efforts in poultry raising; and cholera, pip and kindred diseases will be things of the past. Just here I will say I never have a case of either—positive proof, I think, of the efficacy of my preventives—carbolic acid and lime. In the coming autumn (as in the past) I will dispose of every hen that is more than two years old, keeping through the winter no more poultry than I think will serve me until young chicks of the spring are ready for the table.

During the winter we feed the fowls liberally; if the ground is frozen, giving them all they can eat, this food is returned to us in eggs; for the mooted question, "Will very fat hens lay?" I have settled to my satisfaction long since, and there is no hesitancy about giving the food.

In February I commence to set hens; about March 1 have out a lot of chicks; these have but one enemy—the hawks; this spring my earliest chickens were a lot of eighty-one and the hawks left me only forty-seven.

I stated that I used carbolic acid freely. I did in years past, but have now substituted "Little's Chemical Fluid," or sheep dip, which is as effectual and less expensive. Having mixed a teaspoonful of this with a pint of water I apply it to the head and throat of every chicken immediately after taking it from the nest, and before placing hen and chicks in the nice coops I have. I will tell you of these: they are home-made, neat and convenient, indeed I consider them *comme il faut.* They are 24 inches long, 20 inches broad and 12 inches high, with slats across the top about 1½ or 2 inches apart—the centre slat so arranged as to be moved at will; neither top or bottom is attached to the coop; the bottom is made the size of the body of the coop; the top is made sufficiently large to project on all sides. In warm weather I leave off the top entirely, unless there is prospect of rain during the night; then not wishing to deprive the chicks of a sufficiency of fresh air I place the top over the coop, but elevate it by means of blocks or bricks. These coops are several times during the summer washed with diluted sheep dip. Regularly examine the coops, and if a minute red insect is found hidden in any crevice, wash immediately with the dip and make sure these little fellows get their desert, for they feast at night on the flesh the chicks have stored up during the day. Once a week for many weeks after the chicks are hatched this sheep dip is applied as per directions above to head and throat; and occasionally the chickens are placed in a barrel which has a piece of coarse cloth—such as gundy bag—tucked over it; placing a handful of lime on this cloth, I pat gently, that the lime dust may be sifted through; this destroys the animalculæ in the wind-pipe. This lime must be air-slaked and thoroughly pulverized. I put it aside in the fall for this purpose; judgment must be used concerning the time to keep the chickens in the lime barrel, very young chicks not being able to stand it for more than a few moments if the lime is strong. This lime-dusting I consider of incalculable benefit, materially promoting health, and, consequently, growth. Some pursue the practice of keeping the chickens cooped during a slight rain or until the morning dew is dispelled. This I deprecate; before the sun is up every chicken should have its morning ration and at liberty to chase the insects. My chickens have no water to drink until they are a month or six weeks old, drinking vessels being elevated that only the old fowls can reach them. These vessels are kept supplied with pure clean water in winter, as well as summer; strict attention to this in winter is absolutely necessary; a plentiful supply of water aid the fowls to resist the attacks of Jack Frost upon their combs. The food of the young chicks is only meal or chop (a greater variety would be used if in reach); this is always scalded, the advantage of this is that the food rapidly swells, and is not, as when mixed with cold water, allowed to swell in the chick's crop, and cause what is termed hard craw, which invariably sends a chicken to the compost heap; now, sisters, we must not let ours go there, the brethren must look around for other and less costly fertilizing material. Poultry houses should be tight with means of thorough ventilation under the control of the owner. These houses should be whitewashed once or twice during the season, and a liberal supply of sheep dip should be put in the wash; if after all these precautions any vermin appear, catch every fowl, old and young, and wash each one in a mixture of one teaspoonful of sheep dip to one pint of water. The roosts should be movable and only three feet from the floor. Experience teaches me that the Partridge Cochin and Dark Brahma excel in hardiness, in egg production, for table use and for the market, every other variety.

Horticulture.

Tomatoes.

We gathered to-day (July 5th) our first ripe tomatoes, only two or three, but will have them in plenty during the coming week. But for the cold snap the last of May and the succeeding drought, we would have had them, as usual, during the last week of June. The present season furnishes me with additional proof that we cannot get over the matter of age in tomato plants, and that the pruning away of the first top is valuable in hastening the crop. A dealer told me to-day that the Baltimore market is still supplied with tomatoes from Savannah and Charleston, only a few very inferior ones having arrived from Norfolk. The samples he showed me to-day, which he was selling for a dollar a peck, I would hardly throw to the pigs, and yet so hungry are people for fresh tomatoes, that these trashy, wilted, yellow caricatures of tomatoes are selling rapidly. With proper sowing and treatment of plants, the growers in the light soils of Anne Arundel and the Eastern Shore ought to have tomatoes in abundance now—and of such quality as would drive the the Southern tomatoes out of the market. But instead of making extra exertions in this direction, our growers have come to the conclusion that they cannot compete with the South and actually do not get their tomatoes in as early as they did years ago. I have here right by me an illustration of the difference between tomato plants grown by my method and those grown in the usual manner. One of my men, who has been with me for the past five years, concluded this spring to go into trucking on his own account on another part of the same estate. His tomato plants were raised in the usual way in hot beds started late in February, about the time my plants had their first transplanting and had been cut down. At planting time his plants were apparently larger than mine, and had the usual clusters of blossoms near the top which unpruned plants generally show. He boasted that he was going to get tomatoes before I did. The soil he planted in was not so rich as our garden soil, and this fact ought to have had the effect of hastening the ripening. Now while mine are ripening, he has a prospect of having some *perhaps* by the end of the month, when his plants will be about the same age mine now are. In very early spring the pruning away of the first top, if it did not hasten the maturity of the fruit (which I am satisfied it does), is necessary in order to have a compact, manageable plant. It has also the advantage that at planting time your plants have two or three well developed stems instead of one, and of course that much more for early fruit. W. F. Massey.

Bell-Glasses.

I have often wondered that some one has not invented a cheap portable cover for plants in early spring and for protecting half hardy things in winter. The English gardeners use largely the cumbrous and expensive hand lights. What we need is something

like the *clock* or bell-glass which the French market gardeners use so largely. It strikes me that nothing would be found more useful than these bell-glasses if furnished at a price which market gardeners could afford to pay. The French gardeners use them very largely for growing winter lettuce, for which purpose they are very hardy. In the early spring they could be very profitably used to forward the growth of cauliflower for heading later. After the first of April when the cauliflower would no longer need them, what a wonderful help a thousand or so of these glasses would be if placed over early tomato plants, which could then be planted where they are to remain, being protected by the glasses until they need no further protection. The trouble heretofore has been that these glasses are too expensive. If some enterprising glass manufacturer would get up a lot of low-priced glasses, I have no doubt that the gardeners would take hold of them. Who will do it? W. F. Massey.

Two Vegetable Gardens.

I have in mind two farmers who lived side by side, yet who practiced very different methods of gardening. One put all his small plants in beds about twenty feet long and six feet wide, sowing crosswise the beds in rows eight or nine inches apart. These beds were laid out with scrupulous exactness, were raised a few inches above the surrounding surface, and the seeds were sown by kneeling on a narrow board placed across the bed. A bed of the size mentioned contained from 150 to 180 feet of rows The whole garden was laid out in a style in keeping with the beds. It was a little square enclosure, where a horse was never known except in the spring plowing. The corners were spaded up. This farmer, whom we will designate as A, was known to have his garden in that same place for at least fifteen years.

Adjoining lived farmer B, who was known to be fickle in regard to the location of his garden, for every two or three years he would remove it to some new part of the farm. He selected a loamy and well-subdued strip along a cornfield or a potato patch. He sowed all his vegetables, even his onions and radishes, in rows twenty inches or more apart. He did all his cultivation by horse.

Passing from A's garden one sultry July day, I saw a boy endeavoring to weed a bed of onions. Nearly all the work had to be done with the fingers, and the bed was hard to get at. It was too wide to allow the boy to reach to the middle conveniently, and the space between the rows were so narrow, and the plants had grown so large, that he could not easily stand in the rows. Moreover such an undertaking would likely have marred the beauty of the bed. I found by inquiry that the onions were then being weeded the fourth time, and that still another operation would be needed. Each weeding "spoiled a half a day." Perhaps the boy put little spirit in his work; there is not commonly as much incentive to diligence in such an onion patch with a July sun beatings upon one's back in a sultry, tucked up garden as there is behind a horse in long rows and a cooler soil. The boy declared that two days' work had already been spent upon the onion patch. Scarcely less had been spent upon other parts of the garden of no greater area. Each individual cabbage and tomato plant had to be surrounded soon after it made its appearance by a cylinder of sized paper to keep off cut-worms. The radishes were nearly always wormy, and the cabbages and turnips were lousy. Nearly every season the garden suffered from drought, and as for weeds.

Mr. B's garden was nowhere."

I soon after saw farmer B's garden. It was a marvel of thrift and tidiness. I learned that probably less than half a day had been spent on three rows of vegetables eight rods long. By comparing the two gardens, it was plain that the drought, the weeds and the numbers of insects in A's garden were due to his method of cultivation and to the repeated growing of the same variety of plants upon that one piece of ground. The products of these two gardens, as I learned later in the season, were as dissimilar in size and quantities as their methods of treatment were unlike. In A's garden the soil was well nigh exhausted for gardening purposes, although manure was each year applied in abundance. Farmer B told me that he always had in his cellar an abundance of fresh vegetables, while farmer A complained there was little use in trying to grow vegetables on the farm, since it was cheaper to buy them.—*American Cultivator.*

Preparing Produce for Market.

To be successful in market gardening requires not only a practical knowledge of how to produce crops to the best advantage, but it also requires a knowledge of how to select and prepare the produce for the market. While in a provision store the other day, we examined some asparagus, which appeared to be very good in quality, except a half dozen small stalks placed nearly in the middle, but the tying up was very poor, being very loosely tied, so that with the small stalks it made a very poor appearance. The half dozen small stalks did not add to the size of the bunch, because they fitted in between the large ones, but on inquiry we found that this asparagus was purchased 25 cents a dozen less than the price of asparagus well put up; thus the grower by selecting his asparagus with a miserly hand, has lost at least 20 cents per dozen bunches; the loss by proper selection would not exceed 5 cents per dozen bunches; and would not have cost anything more to have tied it up as it should be. Estimating 300 dozen bunches as the product of an acre, the loss by bad tying, and improper selection, would amount to $60 an acre each year, which would be a good profit.

What is true of asparagus, is true of nearly all other crops; by leaving in a few beets or turnips of an inferior quality, the whole product is injured and must be sold at greatly reduced prices. As a rule a poor quality of produce is not worth sending to market; when it is, it should be sent separate from the good, and sold for what it is worth; for when mixed with first quality it reduces the price of the whole so much, that it would be much better to throw it away.

To be successful in marketing one needs first to build up a reputation for careful selection and honest packing, so that the dealer may rely on what you send him as being as good in the middle of the package as it is on the outside. When such a reputation is once built there will be no difficulty in always having a ready sale for whatever may be grown, and at prices that will give a fair profit, when he who selects with a miserly aim, sells at cost. The buyer is quick to detect little stalks of asparagus, or wormy apples, though one be put in the middle of the bunch, and the other in the middle or the barrel.

Squash Culture.

Many persons who grow squashes have only their labor for their pains, and this poor result is simply due to a want of knowledge of the various pests to which this plant is subject and the peculiar habits of its growth. It is easy to grow squashes with a very satisfactory profit when one knows how; and "the how" begins with the first work of planting and only ends when the product is safely stored in the cellar. And from our own personal experience with this crop we are free to say that even with the fullest and most explicit directions that can be given in print, a few failures more or less serious must be met with before the grower can say truthfully, "I know it all." Squash love heavier and moister soil than the melon and cucumber tribe, and the most loamy field or corner, where the moisture is long retained, either naturally or by the most thorough cultivation, should be chosen for it. It is also a profuse glutton, and will not object to take a whole compost heap for its individual property, so that the soil should be prepared by plowing in as much manure as can be secured, as a beginning, to be supplemented by a liberal supply in the hill, and an additional sprinkling of rich fertilizer on the surface. "Nothing comes of nothing," and if the crop is given nothing it simply gives it back again, and although the squash is a succulent vegetable, yet its seeds, its flesh, and even its rind, are remarkably rich in all the elements which are abundantly found only in rich soils. And therefore if one would have squashes one must feed the soil well.

Squashes need a good deal of room, and we would put the hills nine feet apart. It pays to take special pains to make these hills storehouses of food for the plant. At nine feet apart there are 540 hills to the acre, and giving 40 pounds of manure to the hill, in addition to 15 loads plowed in, would require about 25 loads to the acre. This manure is most easily spread by dropping the manure from the cart or wagon at every nine feet each way, carefully keeping them in line. A load will make 22 heaps of about 100 pounds to the heap; a little more than half of this is spread towards the outside of the square, and the rest is spread thickly at each center. By plowing the manure under in narrow lands or ridges and marking the cross lines, we get the places for the hills and save all spade work in digging in manure.

Rather late planting is desirable so as to get the various insect pests at work on the earlier crops and out of the way if possible. The small striped beetle is the first of these pests which must be looked after as soon as the plants appear above the ground; with him come the small black flea beetles. Both of these are "fixed" by dusting the plants with white hellebore. It is not necessary to harrow before planting; this may be done afterward and serve as cultivation, and the hills may be dressed over with a hand-rake. The seeds will come up more quickly and certainly if planted edgewise in the soil.

As soon as this work is out of the way, the squash grower had better make a supply of the kerosene emulsion for the use and behoof of the squash bug and the squash vine borer, as well as several other pestiferous insects which torment him. This consists of one pound of whale-oil soap dissolved in one gallon of hot water, and to this one pint of kerosene oil is added and well beaten into a smooth emulsion. This is sprayed over the vine and a small quantity is poured onto the stem so that it runs down into the soil and protects this vulnerable part of the plant. To encourage the production of fruit the ends of the leading vines are pinched off when they begin to trespass onto the neighboring hills, and the growth of lateral branches is thus forced, and these only bear the fertile flowers. This part of the cultivation is of the greatest importance, and if neglected one will have splendid vines but very little fruit. A yield of seven tons to the acre is a very common one, and four fruits of seven pounds each to each hill will make this weight.—Henry Stewart, in *N. Y. Times.*

Summer Radishes.

Outside of our large cities and their vicinities this class of Radishes is comparatively little known; yet, to those fond of this piquant relish, they form a valuable link between the early-forcing and the winter varieties. All are larger, somewhat stronger in flavor, and of slower growth than the common kinds, requiring six weeks or more before they become fit for use.

They need rich, mellow, rather sandy soil for their best development, and may be sown in succession at any time from early spring till September. *Yellow Turnip*, *Golden Yellow Turnip-shaped* and *Olive-shaped Golden Summer* are the varieties most frequently found in cultivation; but none of these have pleased us so much last summer as the new *Yellow* Perfection Radish. Grown alongside of the varietses named above, it was not only of better quality, but retained its crispness longer than the others, without becoming stringy.

All summer Radishes should be finely sliced and lightly salted for about an hour before eating them. This will diminish their pungency considerably.

Some Showy Flowers.

As a general thing, our more delicate flowers—the kinds we would select for a bouquet, or for use in vases and on the table—are not so well adapted for use in large beds in the garden, or on the lawn, where a color-effect is aimed at rather than individual beauty, as some of the following rather coarser flowers:

MIRABILIS, OR FOUR-O'CLOCK.

This is a strong grower, often covering a space three feet square, if given a good soil to spread its roots in. It blooms profusely Its magenta, violet, white, and striped flowers are quite as attractive as some varieties of Petunias, which they considerably resemble in shape. It makes a good summer hedge if the plants are set about two feet apart. It can very easily be raised from seed planted in the open ground in May.

ESCHSCHOLTZIA, OR CALIFORNIA POPPY.

A very showy flower, not a very robust grower, rarely being seen more than a foot in height. Its foliage is finely cut and very pretty, and serves as an excellent background or ground-work on which to show off the bright yellow and orange flowers, which are in shape very much like a small single Poppy. It is a good summer bloomer, and a bed of it is a brilliant sight in July and August.

THE MARIGOLD.

This is another old flower, which sooner or later, will be "in style" again, I venture to predict. If the Sunflower can be popularized, I see no reason why this flower should not. It is quite as brilliant and can be used with much better effect. Like the Four o'clock, it makes a good low hedge against which other flowers can be shown off to good advantage, especially scarlet ones. The French varieties are not such strong growers as the Africans, but are better bloomers. The foliage is pretty, being somewhat fern-like, and has a strong pungent odor that is not at all disagreeable. The striped varieties, yellow and brown, are velvety in the intensity of their color, and are really beautiful flowers. The large double ones are not as desirable as the small single ones. These flowers are very effective in large beds when used with scarlet Geraniums. They can also be made effective when grown with white Phlox.—*Cor. Am. Garden.*

Mowing Lawns.

To maintain a lawn in perfect condition, it must be mowed every week or ten days, but not so close as to lay bare the grass roots. Nothing is so destructive to a good lawn as too close mowing. If the mowing is done regularly at proper time, the clippings need never be removed, except perhaps after the first mowing in spring. In fact, the clippings constitute a valuable fertilizer and mulch, of which the lawn should not be deprived, and rakes do generally more harm than good on a lawn. The best implement for smoothing a lawn is a good roller.—*Ex.*

The American Farmer

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
AGRICOLAS." . . . . . *Virg.*

PUBLISHED ON THE 1ST AND 15TH OF EVERY MONTH,

By SAMUEL SANDS AND SON,

At No. 128 West Baltimore Street,

(*Sign of the Golden Plow,*)

BALTIMORE, MD.

WILLIAM B. SANDS, Proprietor.

SAMUEL SANDS, WM. B. SANDS, } Editors and Publishers.

Richmond, Va., Office, 619 W. Main St.

SUBSCRIPTION:

$1.50 a year, in advance. Clubs of five or more will be supplied at $1 each.

ADVERTISING RATES:

	1 Time.	1 Mo.	2 Mo.	3 Mo.	6 Mo.	12 Mo.
1 Inch 12 lines	$1.25	$2.25	$4.00	$5.50	$9.00	$15.00

Liberal reductions will be made on larger advertisements. Advertisements to remain on outside page subject to special contract. Transient Advertisements payable in advance—all others quarterly. Advertisements should reach us by the 12th and 27th of the month, to secure insertion in the succeeding issue.

*** Subscribers who have minerals, ores, marls, fertilizing materials, or other substances, will be advised through our pages, by competent chemists, as to their composition, uses and value, by forwarding specimens to this office, *expressage or postage prepaid.* Questions as to application of chemical science to the practical arts will also be answered.

*** Persons desiring information or advice on diseases or injuries of domestic animals, will receive replies from a competent veterinary surgeon, by giving a plain statement of the symptoms, etc.

☞ At the office of THE AMERICAN FARMER are located the offices of the following organizations, of each of which its proprietor, Wm. B. Sands, is secretary:

Maryland Horticultural Society.
Maryland Dairymen's Association.
Maryland State Grange, P. of H.
Agricultural Society of Baltimore Co.

BALTIMORE, JULY 15, 1884.

Richmond College.

In our advertising columns will be found the announcement of this institution, one of the most effective and thorough educational agencies in this section of the country. Our regular contributor, Dr. Puryear, is Professor of Chemistry therein and chairman of the faculty.

ATTENTION is called to the advertisement of Wilson's green sand marl, a cheap natural fertilizer said to contain valuable ingredients in the shape of phosphates and potash.

SHEEP FOR SALE.—Offers for sheep will be found elsewhere in this issue, namely, of Lincolns, by Mr. Lawford; Southdowns, by Mr. Morris, and Cotswolds, by Mr. Gray.

Crop Report for July.

The Department of Agriculture has issued its July bulletin. The result is very encouraging. From the spring wheat sections reports show the prospects better than in almost any past year. Indications thus far point to a spring wheat crop surpassed by only one year's production. From the corn belt a little further South reports are quite satisfactory. The crop is well advanced, and in a very good condition. Going still further South from the tobacco belt the reports are fairly encouraging, though in some sections the weather has been unfavorable to growers. On the whole, however, the indications point to a tobacco crop above the average in acreage and yield. In the cotton belt the crop in certain sections has been injured by an unusual amount of rain. This is particularly true in Mississippi.

Home Department.

Take Life Easily.

The busy housekeepers—nine-tenths of whom are just now up to their elbows in jellying, canning and preserving in every conceivable way that will save the abundant crops of fruit for winter use—will think the above suggestion very untimely, because to most persons it implies doing as little as possible or nothing at all. They forget, for everybody who thinks must know, that doing nothing or next to nothing is often the hardest kind of work, for it makes life itself a burden; work does not necessarily mean labor, and again we may labor at the easiest kind of work. What we need to learn in order to have an easy life is to work easily. Not slowly or indifferently, but giving just mind and muscle enough for the purpose in hand, and no more. It is the waste of vital force that makes so much hard work, especially in the province of the housekeeper.

A great amount of ingenuity has been exercised, money expended and volumes written in the interest of housekeepers, entirely out of proportion to the benefits received, in order to make housekeeping easy. If results equalled the intentions, we might move in our domestic spheres almost as easily as the heavenly bodies in theirs. Our actual wants are so nearly provided for by the various manufactories and business enterprises that food, clothing and every conceivable household want may be had "ready made" and be put in place by professionals without even our supervision, so that it would seem as if all that was left for the housekeeper is to "eat, drink and be merry;" and yet, alas! she finds her hands as full as her foremother's, and requires as many servants to help her.

Evidently this should not be so. If modern invention has made any progress, some one ought to reap the benefits. If these efforts to emancipate us from us from the slavery, against which woman nature so earnestly rebels, have so entirely failed it seems worth our while to find out the reason why.

Water, hot and cold, and the light in every room in the house for which one need only turn the spiggot, and likewise the diffusing of heat throughout the house from one centre that alone requires attention, would seem to rob household cares of half their terror. And yet the happy possessors of these conveniences require quite as many servants to do the work of these houses as if none of these things were.

We who live in the country and as a rule have not such helps, wonder how those who have them can possible find employment for the number of servants they think necessary, and also fail to understand how, with these mechanical helps and the servants, too, they can possibly occupy themselves usefully. Of course it is easy to understand that those so minded can use or cultivate their intellects all the better for such exemption; but it is of physical employment I am speaking, and, moreover, comparatively few of the favored ones concern themselves about intellectural pursuits.

In the country we need all the helps we can command, because for reasons mentioned above and many others; there is more work to do and harder work than in cities, notwithstanding many advantages we also have over past generations of housekeepers. It is, however, also true of us that most of us still find ourselves overburdened with our duties to a degree that our ancestors would have wondered at with our advantages.

The truth is, that although there is much complaint of the bondage, we nevertheless hug our chains; as fast as we get relief we multiply work by allowing our wants to grow proportionately. We let fashion in dress and manner of living lead us beyond the possibility of accomplishment without extraordinary effort, which makes hard work for somebody. We also mount hobbies and ride them to our endless discomfort; with some it is excessive particularity; with others fashions and flounces; still others give themselves over to unreasonable economy, but by far the greater number to extravagance that may deceive because it is so pleasant at the time, and admits of easy administration of government and expenditure of means, but ultimately becomes the hardest life of any.

The exceptional few who take life easily with no apparent advantage over the rest, excite their wonder and envy, and they can only account for the difference by accrediting this comfortable class with a special "faculty," a general term that may mean anything or nothing. Admitting it to be a "faculty," we need not be very keen-sighted to find that it is the outgrowth of various other qualities, which would never have attained this eminence without careful cultivation. Housekeepers and mothers do not as a rule take up their station in life ready made, and the materials from which they grow are exceedingly crude. They enter upon the most arduous of undertakings with the vaguest conception of what it is; yet withal there is a happy adaptability in the true woman nature that enables her to accept the situation, and, usually, with an earnest purpose to do her best. If, under these conditions, she could only learn from correct teachers, the chances for well doing would be in her favor, and also the probability that she would do it easily. With the object of a housekeeper well mapped out and a correct compass, everything connected with her life and duties may become like the work of the best artizan, easy, because of the perfection of the different parts.

The indulgence of a preference for one part of our duties over others is sure to make the rest seem hard. If we allow ourselves to like sewing, for instance, and to dislike housework, we will rarely give to the housework the time and care it must have to keep things going smoothly, and *vice versa*; we must curb our likes as well as our dislikes for anything that is unquestionably our duty to do in order to preserve a proper balance. With our ideas of fitness and duty well balanced and self-indulgence conquered, we will master almost any situation, so that house, husband, children, servants and guests will each have their due share of our consideration without regard to personal proclivities, and these are the chief elements of the happy "faculty" that makes life seem so easy to some people.

CERES.

RECREATIONS OF A COUNTRY HOUSEKEEPER—No. 7.

A Peep Into Somebody's Note Book.

Mrs. Mackey was glancing down the page to see if the writing was easy to read. She remarked: "I see Marcus has writ'en here 'MY REMEDY APPLIED, and WELL-TRIED,' with heavy under-scores. What does it mean, Dolly?"

"Ah! therein lies the fun of the thing," explained Dolly. "Marcus did really try the remedy that he is recommending there to the brothers. And his housekeeping experiment was, I assure you, about one of the most ludicrous farces that ever came off on the domestic stage." The memory of the performance quite overcame Dolly with a convulsion of laughter.

"That's the way in which his conversion came about so suddenly?" Daisy asked.

"The very way, Daisy. I would have told you, only poor Marcus is so tender on the subject, and has been so penitent and magnanimous about it, that I can't have the heart to refer to it before him. But if I can only get him to write off a description of his one day's experience of woman's work, I think I couldn't get our Society a rarer treat. O, it was too funny! No description could do it justice. But pardon me, Sister Mackey, for interrupting, and please proceed. I want you to see what a little experimental knowledge can do for a man."

Mrs. Mackey read aloud:

"June 27.—Some men are such insufferable prigs. They think because they are men they are superior animals and have nothing to do with the common details of everyday labor. Specially do they scorn and underrate woman's work as something quite insignificant and beneath their lordly notice. Now I candidly confess myself one of this sort—a prig of prigs—have been!—but I am proud to own I had the courage, for once in my life, to find out a little truth for myself; and surely if the price paid for a thing is any criterion of the worth of the thing, my knowledge ought to be a valuable commodity, for I purchased it at a tremendous cost." Here Dolly could with difficulty restrain her mirth. "There are very few matters of general interest, about which most men make such deplorable mistakes as about the ordinary home work of women. And when men are unfortunately obtuse in this matter—I have been obtuse myself and know all about it—they are not to be cured but by the hard and wholesome blows of experience. As well expect the Ethiopian to change his skin, or the leopard his spots as for gentlemen of this ilk to change their opinion. You may talk, argue, denounce, it does no more good in the way of convincing their reason than would so much idle wind blown into their ears. I know exactly how it is myself. I was in entire accord with all they think and feel on the subject, and having effectually cured myself, I think I have earned the right to prescribe for all such MY INFALLIBLE REMEDY. It is very easy for a man to descend to a comfortable morning room and blow the whole house up because his breakfast is not ready at a certain hour, when probably it has been beneath his dignity to know the state of the case or the requirements of the situation. I have done this myself. Such gentlemen deserves to breakfast as I did—on the blast of his own trumpet's 'blow up.' And if you are laboring, or resting rather, under the same delusion that I was—that it is nothing to get a breakfast; that it is quite as easy to get it as to eat it, all I have to say, my brothers, is TO GET UP AND GO TRY IT. Not brag, nor bluster, nor belittle the work, but just go do as I did—go and try it for yourselves, gentlemen; and if the fruit of the experiment will not be mellower and riper fruit for your judgment to feed on, why then I'll try the remedy over again myself. ["Never, Marcus, please," ejaculated Dolly.] "You may smile and think I was a gentleman at small to be doing woman's work, but I honestly assure you, as small as I may have seemed, I was incomparably more of a man than I have been in all these many years, that I have left little wife to struggle on alone and never so much as took the trouble to find out what her work really was. And all you prigs of my order of dignity, allow me to tell you, are of my measure—small, very! Your wife thinks so, too, believe me, although she may be too generous to tell you so. It isn't man's place to intermeddle with woman's work. But it is his place to aid, to support, to sympathize with her, and if he cannot do this without getting personally acquainted with her work, then I say, emphatically, it is his duty to put himself in her place. For there is absolutely nothing that more promotes the pleasure of that mutual aid association—the household—than a generous appreciation and flattering acknowledgment of each other's work. * * The requirement is on both sides. But there is something in the condition of woman and woman's work that makes this estimation of service doubly necessary and doubly incumbent upon us to render. In the first place, a man has most strength to start with, and the tendency of his employments, usually, is to increase his strength, whereas woman's work,

from the force of natural circumstances, oftener than not, increases her weakness. If a man's work lies at home it mostly takes him into the open air, or he can take it into the same refreshing medium. If it lies abroad he has the variety of faces and places to enliven and direct him. But only think of the burden of monstrous monotonies that a housewoman's little hands have to carry! The unending circle of samenesses her little feet have to tread. The battle of life as experienced out on the farm, or in the slaughter-house, or in any unconfined field of labor—I do not except even the soldier's battlefield—is not, in my terribly hard-earned judgment, to be compared with the wearing, wearying wrestle of a poor woman's indoor life."

"[Poor, dear Marcus!" murmured Dolly, "he was so worked up himself that day, he saw things through a magnifying glass."]

"Take simply a clean woman's skirmish with dirt. How never relaxing, never relenting, and, I might add, (since the earth is made out of dust) never contenting it is. From morning till night she may stand with the used-up broom in her hand (herself also used up), but she commands no pity, nor even notice. Instead of there being a monument raised to her energy and self-sacrifice that would lift her up in that touching attitude, and hold her up for all men's grateful recognition, the passing foot treads down her triumphs and shakes off its dust as if for a testimony against her. Testimony against her instead of for her, as the careless men's careless feet always are. And, by the way, if they'd only shake their foot-dirt out o'doors and keep their bootjacks and slippers in doors, how much more comfortable, not to say loveable, animals they would be to their dear little over-taxed wives, who have trouble enough to stand without these unnecessary masculine additions. Troubles enough, gracious knows, in the natural and unavoidable dirt of domestic dogs and cats and spiders and rats, and the ordinary belongings of the most favorable and best regulated of households. And when to these is added the dirt and confusion made by children and servants, who can estimate the amount of labor that is required to meet the demands of the most unostentatious and uneventful of homes? To these, add the care of poultry, and dairy, and garden, and flowers, and fruit, and kitchen, with its making and baking, and broiling and boiling, and moiling and toiling. Then the school-sending and the clothes-mending, and the church-going and the society sewing, and the thousand and one duties that woman is heir to. Who, I ask, on God's earth can watch her as she goes through it all, day after day, and not exclaim: 'O, woman, great is thy faith; great also are thy works!'

"Only think of one little body, often a weak, nervous little body, too, having to prepare, or to have prepared, three hundred and sixty-five breakfasts, three hundred and sixty-five dinners, three hundred and sixty-five suppers in one year. Picture it, think of it, unobserving man! and, if you never thought of it before, keep saying it over to yourself, these three hundred and sixty-five times, till it sticks in your throat and is more indigestible than any hasty dumpling of half-boiled dough that ever your good little wife gave you. And mind! don't you ever get mad with her, no matter what she gives you.

"When she has tried her best and has failed, kiss her, and pet her, and love her, and make her see how wonderfully wonderful you think she is. And if you don't really believe she *is* wonderful, in spite of failures now and then—well, I repeat it, gentlemen—all I have to say to you is TRY MY REMEDY, and it will cure your unbelief. I say again, and I can never say it too often, for I say it from conviction of experience, that the housekeeper of broad views and narrow means who goes through all the round of duty that each day demands of her, and goes through it all with uncomplaining patience, and unflagging energy, and unfaltering trust, is the bravest soldier that fights on any battle-field and the best saint on any kalendar—contradict it who will; and let repentent misers and death-shaken philanthropists make what endowments or bequests they please, for my part, if I had a million of moneys to go into a charity fund, for the most deserving, I am sure I could not accomplish the purpose better than by investing it for the benefit of just such good little dear women. And now, brothers of the Grange, and brothers and fathers of the home, as I have begun to pound this subject, I trust we will keep the hammer going, never let it rest, until we come, one and all of us, into a kinder notice and juster appreciation of woman's work—" and Mrs. Mackey folded the note-book.

"Now isn't Marcus in a sublime state of mind?" laughed Dolly, as we dispersed.

"He is indeed," responded several of the ladies. "Please tell him, with our love, that he must 'give in his experience' for the benefit of the female world."

REPORTED BY SISTER TARPLEY.

Preparations for Winter Flowers.

A correspondent of the *Ohio Farmer* says:

Chinese primroses may be obtained of any reliable florist. If you have never cultivated them, perhaps a few words in regard to their care and culture may not be amiss, as they are a trifle particular in regard to care, but if properly cared for, will repay it all.

First, in potting, use a soil composed of one part leaf mold, one part thoroughly-rotted manure—so well rotted that it seems like rich soil itself—and one part good garden soil and sand, half of each. If you procure plants this spring, pot in about four-inch pots, firming the soil well and giving water enough to soak the soil well. Then do not water again until the earth seems quite dry. It is one secret of success with primroses not to water too often, but soak the soil well each time. The pots should be well drained, for the plants cannot stand wet feet. Another thing to be avoided is setting the plants too deep. Plant so the lower leaves will just touch the top of the ground.

Now set your plants in some sheltered place. I prefer a place where it will not rain on them. Carefully pick off all buds that may appear before the first of September, at which time you should re-pot in five-inch pots, just turning the ball of earth out on your hand and then placing in the new pot and filling soil around and under it, packing the new soil well, and watering as before directed. Now place in a cool north window, if you have one, and, if possible, keep the temperature where the plants set at from 40 degrees at night to 60 degrees in daytime, and if you don't have lovely flowers, put the blame on me.

GERANIUMS.

My treatment of geraniums, to have flowers in winter: To begin with, you want the freest bloomers obtainable, and if you don't know the best kinds, send to the most reliable florist you know of for as many varieties as you want, leaving the selection to the florists, telling them what they are for. But be sure to select for crimson Ernest Lauth and for pink Madam Thibeaut, both double and splendid bloomers. But don't get more than you can have an abundance of sunlight for. One, with plenty of sunshine and air, will give you more pleasure than a dozen with insufficient light. Having your plants potted in five or six-inch pots, as the aim now is to get growth and not bloom, if they show disposition to grow tall instead of branching, pinch out the tops of the branches, and be sure to keep all buds picked off until about September 1st, when they should be placed in position for winter, so they will get used to their positions before winter fires are made. They will not need re-potting unless badly pot-bound, and then in only one size larger pot than that in which they were growing. Keep them cool, from forty-five to sixty-five being a good range. Give plenty of air, but it is best to give air by opening a door or window in another room, leaving a door open between the two rooms, as in this way the plants are not subjected to a cold draft directly upon them. All plants are better for having a plenty of pure air. Keep a vessel containing water on your stove, and see how your plants will thrive.

Hyacinths give the best satisfaction for the first winter after they are imported for winter blossoms, and they are the surest to bloom, but will only do for the house one winter. Here, again, you must buy of a reliable florist, or you may get old bulbs, which are almost worthless.

I forgot to say do not over-water your geraniums. Water only when the soil is quite dry, but give sufficient to soak the soil thoroughly—not a mere dribble, but enough to wet the whole ball of earth.

Baltimore Markets—July 15.

Flour.—Quiet and steady. We quote: Howard Street and Western Super, $2.75@3 25; do. do. Extra, $3.35@4 00; do do. Family, $4.25@5.50; City Mills Super, $2 75@3.15; do. Extra, $3.35@4.00; do. (Rio brands) Extra, $5 37@6 02; Baltimore Winter Wheat Patent, $6.50; do. High-grade Family, $6; do. 2d-grade Extra, $5.75; do. Third-Grade Extra, $5.50; Fine, $2.40@2 60; Rye Flour, $3.50@3.75; Corn Meal ₹ 160 lbs, 1 60.

Wheat.—The market for Southern is quiet, though there is a fairly active demand. Very common and smutty parcels sold at 80@86 cts., garlicky and damp at 90@93 cts. and tough to choice at 94@$1 for Fultz and 95@$1 01 for longberry. For Western the market is dull. The closing quotations were at 95¼@95¾ cts. for spot, 95¼@95¾ cts. for July, 96¼@96¾ cts. for August, and 97¼@97¾ cts. for September.

Corn.—The supply of Southern is limited and the market is quiet. Small lots good to prime white sold at 73@75 cts. Yellow is quoted at 65@66 cts. The market for Western is dull. The closing prices were 58¼@59 cts. for spot, 58¼@59 cts. for July, and 59¾@59¾ cts. for August.

Oats.—The demand is moderate and the market is quiet and easy in tone. We quote Maryland and Pennsylvania at 37@40 cts, mixed Western, 35@37 cts; white do., 38@40 cts.

Rye.—There is only a moderate demand, but the offering is limited and the market is quiet and nominally steady. Sales 150 bushels Pennsylvania at 67 cents.

Cotton.—There is some inquiry from shippers, and the market is quiet and about steady. We quote middling at 11 cts., low middling at 10¾ cts., and good ordinary at 9¾ cts.

Hay and Straw.—Prime Hay is in good demand, and for such the market is firm, but common stock is dull. We quote baled Hay as follows; Cecil-county Timothy at $16@17 ₹ ton; Maryland and Pennsylvania do. $13@13; do. mixed, $9@12; Western common to fair, $10@13; do. good to choice, $13@15; New York stock is selling at $13@15 per ton. Straw is steady at $7@8 for Wheat, $10@11 for Oat, $12 for long Rye and $10@11 ₹ ton for short do.

Mill Feed.—There is an ample supply, but the demand is regular and the market is steady at $14 50@15 50 ₹ ton for Western winter bran, $16 for do. middlings, and $18 for City Mills middlings.

Provisions.—A moderate demand for job lots is reported, and the market is quite steady. Packed lots from the store are quoted as follows: Bulk shoulders, 7¾ cts.; clear-rib sides, 9¾ cts.; bacon shoulders, 8 cts.; clear-rib sides, 10¼ cts. Hams, sugar-cured, 14½@15½ cts. Refined Lard, in tierces 9¼ cts. Mess Pork, $17.25 ₹ bbl. for new.

Butter.—Receipts of fresh Western are ample, but the demand is moderate and the market is quiet and only steady. Medium and low grades are neglected. We quote choice New York State at 20@21 cts.; fresh western packed choice at 14@15 cts.; do. good to prime at 12@13 cts., and near-by receipts at 12@15 cts. ₹ lb.

Eggs.—The market is quiet and easy under liberal receipts and a moderate demand at 15@16 cts. per dozen for choice fresh lots, and 13@14 cts. for icehouse.

Tobacco—The market continues active for all desirable grades, which find ready buyers at full prices. We quote: Maryland inferior and frosted $2@3; sound common $3.50@5; good do. $5.50@6.50; middling $7@8 50; good and fine red $8.50@11; fancy $12@14; upper country $6@20; ground leaf $2@9. We quote Ohio inferior to good common $4@6; greenish and brown $7@8; medium to fine red $8@11; common to medium spangled $7@11; fine spangled and yellow $12@20; air-cured medium to fine $7@14.

Live Stock—*Beef Cattle*—The market active. Prices of Beef Cattle ranged as follows: Best $6@6 75; that generally rated first quality $5 25@6; medium or good fair quality $4.25@5 12½; ordinary thin Steers, Oxen and Cows $3@4; extreme range of prices $3@6 75. Most of the sales were from $4.75@5.50 per 100 lbs.

Swine—The demand is fair. We quote rough Hogs at 6½@7 cents, the better grades 7@7¼ cents per lb. net.

Sheep and Lambs—Good Sheep and Lambs are scarce and in fairly good demand, all others are dull. We quote Sheep at 3@4¼ cts. and Lambs at 4@6¼ cents per lb. gross.

WILSON'S

GREEN SAND MARL

Fertilizer

This article has been thoroughly tested on WHEAT, CORN and VEGETABLES, and has given very satisfactory results. IT HAS BEEN ANALYZED by one of the BEST CHEMISTS in Baltimore City and N. Y., and pronounced the FINEST MARL EVER DISCOVERED. It contains a large per centage of ANIMAL BONE PHOSPHATE.

Single Bag of 200 lbs. $1.50. Per Ton $12.00.

WAREHOUSE:

162 FRANKLIN STREET,

Between Green and Paca Streets,

BALTIMORE.

TO WHEAT GROWERS!

The undersigned, PIONEER in the manufacture of Fertilizers in this city, and ORIGINATOR in 1858 of the Formulas and processes of manufacture of

"EXCELSIOR" & AMMONIATED PHOSPHATE,

So well and favorably known by the Agricultural public, relying upon his experience and personal reputation hitherto acquired in the uniform excellence of these Fertilizers, as manufactured by him, continues to offer them to the Farmers and Planters of Maryland and Virginia, with the assurance that the high standard quality of each will be maintained as heretofore.

AND

For growing Wheat, it is the universal opinion of the farmers of Maryland and Virginia, after over twenty years experience in the use of these FERTILIZERS, that an application of 100 pounds is equal in its effects to 200 pounds of any other Fertiliser or Guano, therefore fully 50 per cent. cheaper.

With my present advantages and superior facilities for manufacturing, I challenge competition with any Fertilizer sold in the United States, in Quality, Mechanical Conditition and Price.

By strictly adhering to my Original Formulas, using only the most concentrated materials, and superintending in person their manufacture—as for the past TWENTY-FIVE YEARS.

UNIFORM QUALITY IS GUARANTEED.

☞ Farmers, to secure the ONLY GENUINE EXCELSIOR and PHOSPHATE, should see that every Bag is branded as above, with the ANALYSIS and MY NAME IN RED LETTERS.

J. Q. A. HOLLOWAY,

107 McELDERRY'S WHARF, BALTIMORE, MD.

GRAPE VINES

Also other small fruits and all older varieties. Grapes. Extra quality. Warranted true. Cheap by mail. Low rates to dealers.

Prentiss

Pocklington, Duchess, Lady Washington, Vergennes, Moore's Early Jefferson, Early Victor, Brighton.

LARGEST STOCK IN AMERICA
Prices reduced. Illustrated Catalogue Free.
T. S. HUBBARD, Fredonia, N. Y.

TEACHERS WANTED—10 PRINCIPALS, 12 Assistants, and a number for Music, Art, and Specialties. Application form mailed for postage. SCHOOL SUPPLY BUREAU, Chicago, Ill. Mention this Journal.

COTSWOLD SHEEP.

Choice Ram and Ewe Lambs by "BISMARK," sheared last season 18 lbs. 2 oz., also yearling Bucks by imported "EARL OF WARWICK." Address

J. B. GRAY,
Fredericksburg, Va.

RICHMOND COLLEGE,

RICHMOND, VA.

The next session begins SEPTEMBER 19TH and continues nine months.

FACULTY.

EDMUND HARRISON, A. M., Prof. of Latin.,
H. H. HARRIS, M. A., LL. D, Prof. of Greek.
A. B. BROWN, D. D., LL. D., Prof. of English.
EWD. B. SMITH, M. A., Prof. of Mathematics.
CHARLES H. WINSTON, M. A., LL. D., Prof. of Physics.
B. PURYEAR, A M., LL. D, Prof. of Chemistry.
WM. D. THOMAS, M. A., D. D., Prof. of Philosophy.
Profs. SMITH and HARRIS, Modern Languages.

EXPENSES OF A RESIDENT STUDENT.

Two hundred and four dollars, per nine months' session, cover all the expenses of entrance fees, tuition, board, fuel, lights and washing.

Eighty-seven dollars and fifty cents will meet the expenses of a non-resident student.

The College grounds, comprising thirteen acres of land, have been greatly improved and beautified in the last two years. The institution offers very superior advantages in the healthfulness of its location, in its abundant provision for the comfort and convenience of students, and in the extent and thoroughness of its course of instruction.

For Catalogues, giving full information, apply at the bookstores, or address

B. PURYEAR,
Chairman of the Faculty.

SALT

Ashton's, Phœnix, Deakin's, Evans', Worthington's full and quarter sacks. Dairy. Rock. Fertilizing Salt, containing 7 per cent. Sulphate Potash. Also,

KAINIT,

OR GERMAN POTASH SALT.

Warranted Genuine and Full Standard: also Calcined Kainit, Muriate Potash, Nitrate Soda, &c.

Cargoes constantly arriving and all for sale in lots to suit by

JAS. BONDAY, JR. & CO.
58 SOUTH STREET, Baltimore, Md

Send for one of our Books on use of Kainit free of cost.

SMALL FRUIT PLANTS

VINES, ETC.

At Reasonable Rates.

Jersey Queen, James Vick, Manchester, Bidwell, Finch's Prolific, and most of the old standard varieties of
STRAWBERRIES, RASPBERRIES, GRAPES, &c.

Send for Price List, also my $5.00 offer of assortment of each. Am also breeding a choice lot of P. Rock fowls, trios $5, Eggs $1.50 per 13. Address

R. S. COLE,
Cedar Hill Small Fruit Farm,
HARMANS, A. A. Co., Md.

PERUVIAN GUANO!

DIRECT IMPORTATIONS.

Having received all the Guano shipped to this country, DIRECT FROM THE DEPOSITS, under New GOVERNMENT CONTRACT, we offer to the trade

PERUVIAN GUANO,

Of the Best Quality and in Excellent Condition.

For Particulars and Prices apply to

HURTADO & CO.,
16 & 18 Exchange Place, New York.

OPIUM and WHISKY HABITS cured at home without pain. Book of particulars sent Free. B. M. WOOLLEY, M. D., Atlanta, Ga.

Field & Garden Seeds

Our stock of Seeds are new and true to name, embracing all the valuable varieties, and are from the most reliable growers only. Thankful for the commendation and increased patronage which have crowned our efforts to supply the best seed in the market, we will strive to merit confidence.

FERTILIZERS.

GRIFFITH & TURNER'S ANIMAL BONE PHOSPHATE. A high grade Phosphate, a complete fertilizer, always gives good results.

GRIFFITH & TURNER'S ALKALINE PLANT FOOD. Prepared with special adaptation to the growth of Corn, Potatoes, Tobacco and Vegetables requiring Fertilizer rich in Potash.

GRIFFITH & TURNER'S RAW BONE.

HARVESTING MACHINERY.

McCORMICK'S TWINE BINDER.
McCORMICK'S IMPERIAL REAPER.
McCORMICK'S DAISY SINGLE REAPER.
McCORMICK'S IRON MOWER.

HORSE RAKES.

Both Hand and Self-Dump.

Oliver Chilled Plows

run lighter, are more easily adjusted, and do better work than any other plow.

Malta Shovel Plows. Iron Age Cultivators
Corn Drags. Cahoon Seed Sowers.
Planet Seed Drill and Cultivator.
Empire Grain Drills. Advance Horse Rake.
The Bar Horse Rake. The Victor Horse Rake.
The Hagerstown Horse Rake.
Hay Tedders. Foust's Hay Loader.
American Hay Elevator.
Double Harpoon Hay Fork. Grain Fans.
Philadelphia Lawn Mowers.
Corn Shellers. Cider Mills.
Farmer's Friend Corn Planters.
Keystone Corn Drills. Bay Presses,
Hay, Straw and Fodder Cutters. Butter Workers.

MOSELEY'S

CABINET CREAMERY.

Stoddard Churns. Davis Swing Churns
Fountain Pump. Cucumber Pumps.
Patent Galvanized Steel Fence Wire, cheap, durable and easily put up.

REPAIRING DONE WITH DISPATCH.
SEND FOR CIRCULARS.

GRIFFITH & TURNER.

DEALERS IN

Agricultural Implements, Fertilizers and Seeds,

41 & 43 NORTH PACA STREET,
BALTIMORE, MD.

THE POPPLEIN SILICATED PHOSPHATE CO.

Manufacture and have constantly in stock the following Popular Brands of

FERTILIZERS.

THE ACTIVE AMMONIATED BONE,
THE MODEL AMMONIATED BONE,
THE FAVORITE AMMONIATED SUPER PHOSPHATE,
THE POPPLEIN SILICATED PHOSPHATE,
ALKALINE BONE PHOSPHATE
SOLUBLE BONE PHOSPHATE,
YARRA GUANO.

ALSO PURE RAW AND DISSOLVED ANIMAL BONE.

Goods Compounded according to any special Formula desired on short Notice.

All Goods Guaranteed.

OFFICE: 128 W. Baltimore Street,
(Under "AMERICAN FARMER.")
☞ Factory at Canton, Baltimore County.

FARM WANTED.

Wanted to rent, for a term of years, a small farm on the Eastern Shore, in first-class condition, suitable for market garden purposes. Would prefer a place immediately on salt water and convenient to steamboat landing and railroad station. Talbot County or the Eastern Shore Counties of Va. preferred. Address with full particulars, GARDENER,
AMERICAN FARMER OFFICE,
128 W. Baltimore St., Balto.

2806 Lbs. W'ght Of Two OHIO IMPROVED CHESTER HOGS. Send for description of this famous breed. Also Fowls. L. B. SILVER, CLEVELAND, O.

Cut This Out & Return to us with TEN CTS. & you'll get by mail A GOLDEN BOX OF GOODS that will bring you in MORE MONEY, in One Month, than anything else in America. Absolute Certainty. Need no capital. M. Young, 173 Greenwich St. N. York.

WM. FRASER,

(Late Supt. Patterson Park.)

Landscape Gardener & Florist,

277 East Baltimore St., Baltimore.

COUNTRY SEATS Laid Out. GARDENS Planted and Kept. TREES Planted and Pruned, GRADING and SODDING, at lowest rates. PLANS and ESTIMATES furnished. Orders by mail promptly attended to.

25 YEARS IN THE POULTRY YARD

108 Pages. It teaches you how to rear them to take care for them, to feed, to have them lay eggs in cold weather, to prevent and treat all diseases of old or young, to be a "successful" poultryman. Only 25c. in stamps. A Fifty-page book FREE FOR ALL with it.

A. M. LANG, Cove Dale Farm, Concord, Ky.

$50 REWARD will be paid for any Grain Fan of same size that can clean and bag as much Grain or Seed in one day as our Patent MONARCH Grain and Seed Separator and Bagger, which we offer to the public at a low price. Send for circular and price list, which will be mailed FREE.
NEWARK MACHINE CO.,
Newark, Ohio, U. S. A.

SHOPPING.

Shopping of Every Description

Promptly and Economically Done.

References, Information and Circulars given when desired, Address Mrs. A. M. SNOWDEN, No. 38 BOLTON STREET, Baltimore, Md.

KIEFFER'S HYBRID PEAR

THE PEAR FOR THE SOUTH.

FINE TREES In Condition for Shipping. Send for Price List.

H. S. ANDERSON, Cayuga Lake Nurseries
UNION SPRINGS, N. Y. Established 1855.

Caution to Farmers & Dealers

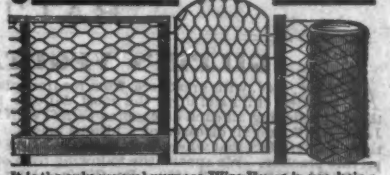
For Safety in procuring your HARPOON HORSE HAY FORKS, *select* only those having thereon an imprint of our TRADE MARK, and thereby save infringement fees.

Catalogues giving reliable information furnished free by M'f'g and Props.,

A. J. NELLIS COMPANY, Pittsburg, Pa.

Also, M'f'g Nellis' Mounted & Floating Harrows, Agt'l Steels, O'm'tl Fencing, Road Graders, etc.

SEDGWICK STEEL WIRE FENCE



It is the only general-purpose Wire Fence in use being a strong net work without barbs. It will turn dogs, pigs, sheep and poultry, as well as the most vicious stock, without injury to either fence or stock. It is just the fence for farms, gardens stock ranges, and railroads, and very neat for lawns, parks, school lots and cemeteries. Covered with rust-proof paint (or galvanized) it will last a life time. It is superior to boards or barbed wire in every respect. We ask for it a fair trial, knowing it will wear itself into favor. The Sedgwick Gates, made of wrought iron pipe and steel wire, defy all competition in neatness, strength, and durability. We also make the best and cheapest all iron automatic or self-opening gate also cheapest and neatest all iron fence. Best Wire Stretcher and Post Auger. For prices and particulars ask hardware dealers, or address, mentioning paper, SEDGWICK BROS., Manf'rs, Richmond, Ind.

$500 CASH FREE!

We offer the above amount of money and ten **Gold Watches** *free* to the first 123 persons answering the following Bible question: **Where is the word Grandmother found in the Bible?** Mention the **Book, Chapter and Verse.**

The first person answering this question correctly, on or before August 30th, will receive $75 cash. If we receive more than one correct answer the second will receive $70, the third $60; the fourth $55; the fifth $50; the sixth $25; the seventh $20; eighth $15; ninth $10; tenth $8; eleventh $6; twelfth $4; thirteenth $2; ten Ladies' Gold Watches to the next ten correct answers, and one dollar each to the next one hundred people answering it correctly. If you are not the first, remember that you may be the second or third, so you stand a good chance for a large prize. Each competitor must, in every case, send 50 cents for **One Year's Subscription** to **THE POULTRY KEEPER** with their answer. This journal is a large 16-page illustrated Poultry Paper, devoted to telling

HOW TO MAKE POULTRY PAY.

If you will send one dollar we will send the paper one year, and a beautiful English Cloth Bound Volume of the **NATIONAL AMERICAN DICTIONARY** containing **700 Engravings, 608 Pages, 40,000 words.** This useful and elegant volume is a Library and Encyclopedia of general knowledge as well as the best dictionary now published. Superbly bound in cloth and gilt. It is not a pocket affair, but a large volume. "The best Dictionary for $1 ever printed."—*Farm, Field and Fireside.*

The regular subscription price of **THE POULTRY KEEPER** is 50 cents per year, so you pay nothing additional for the privilege of competing for one of the above prizes. The money will be sent to the successful ones. The names of those who obtain prizes will be given in the paper. Send one dollar in P. O. order, postal note or registered letter. Don't wait. The Dictionary is worth a dollar, and can be sold at home for that price, and **THE POULTRY KEEPER** will tell you how to make $1,000 per year from one acre of land. Send your answer at once. Postage stamps taken. Sample copy 5 cents.

Address THE POULTRY KEEPER,
89 Randolph Street, Chicago, Ill.

ROSEBANK NURSERIES

GOVANSTOWN, BALTIMORE COUNTY, MARYLAND.

Ornamental and Fruit Trees, Flowering Shrubs, Herbaceous Plants.

WE invite the attention of the public to our select stock of the following: **STANDARD AND DWARF PEARS**—2, 3 and 4 years. **APPLES**—Standard and Dwarf. **CHERRIES**—Standard and Dwarf. **APRICOTS, CRAB APPLES, MULBERRIES, GRAPEVINES,** of the most popular kinds, together with other small fruits. Our Collections of **EVERGREENS, ORNAMENTAL TREES AND SHRUBS** are large, and embrace most of the rarest sorts.

☞ CATALOGUES FORWARDED ON APPLICATION. ORDERS BY MAIL PROMPTLY ATTENDED TO. ALL GOODS DELIVERED IN BALTIMORE FREE OF CHARGE.

W. D. BRACKENRIDGE.

JAMES PENTLAND,
GREENMOUNT GARDENS.

(ESTABLISHED IN 1850.)

Opposite the Entrance to Greenmount Cemetery, BALTIMORE.

KEEPS constantly on hand a choice assortment of healthy and well grown **Plants.** ☞ His stock of Bedding Plants is extensive and in splendid condition. At our store, **No. 27 North Charles Street,** a collection of Plants and Flowers may always be found. Choice Bouquets, Funeral Designs, and designs for the decoration of rooms, tables, and for everything for which flowers are used, put up in the most artistic style of the art, at short notice, and at charges that will compare favorably with any in the country.

SPRINGFIELD ENGINE & THRESHER CO.
SPRINGFIELD, O.

The best Traction and Portable Engines, Separators and Horse Powers in the world.

Handsome Illustrated Catalogues sent free.

GEORGE O. STEVENS,
WINDOW SASHES, BLINDS & DOORS
49
LIGHT STREET,
BALTIMORE.

KEEPS IN STOCK AND FURNISHES TO ORDER: Window Sashes, Doors, Blinds, Mouldings, Brackets, Hand Railings, Balusters, Newel Posts, Bracket Shelves, Barge Boards, Window Caps, Door Caps, Pews and Church Work, Blinds, Hinges, Builders' Hardware, Wood Mantels, Window Frames, Door Frames Paints, Oil, Putty, Glass, Lumber, Bricks, Lime, Sash Weights, Sash Cord, Porch Columns, Tree Boxes.

Also, ROYAL LIQUID PAINTS, ready for immediate application. Recommended for Durability, Elegance and Economy. Put up in ¼, ½, 1, 5, 10 and 50 gallon packages.

The Best Work at Lowest Prices.

GEO. F. SLOAN & BROTHER.
LUMBER,
DOORS, SASH, BRICKS, &C.
IN LOTS TO SUIT.
132 LIGHT STREET WHARF,
BALTIMORE.

GILPIN'S VEGETABLE LIVER PILLS

ARE prepared, with great care, from medical plants; are *coated with sugar*, that they may be taken by the smallest child and upon the most delicate stomach; are intended especially to act upon the Liver, thereby relieving all such diseases as COSTIVENESS, HEADACHE, PARALYSIS, DYSPEPSIA, COLDS, JAUNDICE, and all diseases of a bilious origin. No better evidence can be offered in favor of these Pills than the very fact that where their ingredients are known to family physicians, they are using them in their private practice. We append the following from one of our most prominent physicians:

OAKLAND, June 26, 1869.—*Dr. Gilpin:* After carefully examining the formula of your Sugar-Coated Pills, I feel it but justice to say that the combination is certainly perfect, and comprises the only remedies I ever believed were the proper ones to be used in diseases of a bilious origin. I shall take pleasure in recommending them, not only to my patients but the entire medical profession. Yours truly, J. M. WISTAR, M. D.

From one of the leading retail druggists of West Virginia:

WESTON, W. VA., June 15, 1869.—*Messrs. Canby, Gilpin & Co.*—Gents: Please send by express twelve dozen Gilpin's Vegetable Liver Pills. I have the most flattering accounts from all who have used them, and believe the day is not far distant when they will supersede all others. Yours, F. M. CHALFANT.

We could fill several pages with certificates, etc., from prominent men throughout the country, but prefer to let the Pills in the future, as they have in the past, rest entirely on their own merit, knowing that wherever they are known their use will pass down from generation to generation.

GILPIN'S VEGETABLE LIVER PILLS are sold by all respectable druggists and country store keepers throughout the United States and Canadas.

Principal Depot, CANBY, GILPIN & CO., Baltimore.

ESTABLISHED] **A. E. WARNER,** [1811.

MANUFACTURER OF

SILVER WARE AND RICH JEWELRY

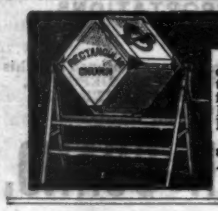
English, Swiss and American WATCHES of the Best Makers,

Importer and Dealer in Diamonds, Fine Watches, Silver-Plated Ware, Table Cutlery, &c.

WEDDING PRESENTS.

Premiums for Agricultural Fairs, Fine Bronzes, Opera Glasses, Shell Jewelry, &c.
All of which is offered at GREATLY REDUCED PRICES.

No. 135 W. BALTIMORE STREET, near Calvert, Balto.



DAIRY GOODS. CHURNS

We make from the best material **Superior Articles of Dairy Goods,** that are models of strength and simplicity. Unquestioned proof given of their durability. Sole manufacturers of **Curtis' Improved Factory Churn, Mason's Power Butter Worker, Lever Worker, Curtis' Square Box Churn, Rectangular Churn, Cream Vats, Dog Power, etc.** "One Family Churn at wholesale where we have no agent." All goods warranted exactly as represented. **TWO GOLD AND FOURTEEN SILVER MEDALS** awarded for superiority.

CORNISH, CURTIS & GREENE, Fort Atkinson, Wis.

CABINET STYLE.

The Cooley Creamers

FIVE GOLD MEDALS and ELEVEN SILVER MEDALS awarded for Superiority of Process and Product.

In Daily Use in Over 20,000 Dairies & Factories.

They raise the most Cream and make the best Butter.

ELEVATOR STYLE.

The **COOLEY CREAMER has a process** different from all other apparatus, the patent on which has been **sustained** by the **U. S. Circuit Court.** It is the most successful **Cream Raiser** the world has ever known.

The Davis Swing Churn,

THE MOST POPULAR CHURN ON THE MARKET.

Because it makes the most butter from a given amount of cream. Because no other Churn works so easy. Because it makes the best grained butter. Because it is the easiest cleaned. It has no floats or paddles inside. Also the **Eureka Butter Worker,** the **Nesbit Butter Printer,** and a full line of Butter Making Utensils for Dairies and Factories. Send for Illustrated Circulars.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

FOR SALE BY LORD & PACKHAM,
88 West Lombard Street, Baltimore.

EASTERN SHORE NURSERIES,

DENTON, CAROLINE CO., MD.

PRICE LIST WILL BE MAILED FREE TO ALL APPLICANTS.

A very fine stock of APPLE TREES, of such kinds as are suited to the soil and climate of Maryland and Virginia. Peach Trees, Pear, Cherry, Apricot, Quince and Nectarine Trees. A large and superior lot of Wild Goose and other Plum Trees. An immense stock of Grape-Vines, embracing 40 kinds, at very low prices. Shade and Ornamental Trees. In short, a complete assortment of carefully grown nursery stock, at prices as low as a reliable and good article can be grown.

☞ Send for Price List before purchasing elsewhere.

J. W. KERR, Proprietor.

M. G. ELLZEY, M. D.,

1012 I Street N. W., Washington, D. C.

Breeder of Highly Bred Gentleman's Roadsters and Saddle Horses, Shorthorn Cattle, Southdown Sheep direct from Lord Walsingham's Celebrated Flock, and Purely Bred Berkshire Swine.

I am now taking orders for delivery in August for 2 two-year old Rams, 10 Yearling Rams, and 10 Ram Lambs.

Correspondence invited. **PRICES LOW.** Some fine Horses now for sale.

Burnside Park Herd.

PRIZE RECORD.

Sweepstake Premium for best herd New Jersey State Fair, 1882.

First Premium for best herd New York State Fair, 1885.

First Premium for best herd Maryland State Fair, 1883, besides many other first premiums for single animals in all the Fairs named.

The herd is headed by the Bull **BLACK PRINCE OF LINDEN, 9063, A. J. C. C. H. R.** Among the females are the famous cows Princess 2d, 8046, 27 lbs. 10 oz. butter in 7 days, (official test); St. Clementaise 18163, 15 lbs. 12 oz. in 7 days; Khedive Primrose 2298, Oxford Kate 13646, Saragossa 22019, Queen of the Farm 9069, and many other celebrated animals.

S. M. SHOEMAKER,

Baltimore, Md.

Communications in reference to the herd should be addressed to

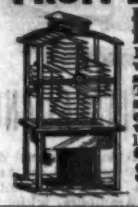
O. Ricklefsen, Manager, Stevenson P. O., Md.

Farm in Baltimore Co. For Sale,

Or Exchange for City Property.

Containing 150 acres; about 25 to 30 acres in thriving timber, principally oak and chestnut; well watered and admirably adapted to a dairy or market farm; the soil is kind and susceptible of the highest improvement; it is now principally set in grass It is at the 15-mile stone on the York turnpike, fronting on both sides of the road, and five stations on the Northern Central R. R.; can be reached at distances of 1 to 3 miles, by good county roads. This is the circle of the members of the Gunpowder Club, and is undoubtedly one of the best locations in the county. Churches of all denominations, and schools, public and private, are convenient. The York turnpike is one of the very best, and the distance from the city permits a round-trip a day for wagoning. Probably no healthier spot in the world can be found. It is laid off in fields of 12 to 15 acres, to most of which easy access is had to water for stock. The dwelling, which is commodious, and large barn, are of stone, with other outhouses, and though old, can be made very comfortable at a reasonable expense; and there are several admirable sites for residences on the premises. This property could be advantageously divided into small lots and sold at a very great advance on the price asked for the whole. Lots on the road have brought as high as $500 an acre, and the extent of the frontage on the turnpike, in the hands of an enterprising man, could be turned to excellent account, but the present owner is indisposed to take the trouble requisite to accomplish this, and would prefer selling the whole together. A gentleman with a very small income independent of the farm, could live on this place without labor, saving the rent of a city residence, by renting the fields on shares to be farmed under his control, reserving a garden and stabling, and the pasturage necessary for his stock. A small tenant's house on the premises would rent for the amount of taxes on the place. As I cannot occupy the place myself, I am willing to sell it on the most reasonable terms, or exchange it for city property in a good locality. For further particulars apply to the subscriber, at office of *American Farmer*. SAM'L SANDS.

THE WILLIAMS FRUIT EVAPORATOR!



Is the PIONEER & LEADING MACHINE OF ITS KIND IN THE MARKET. It has been in use for 10 years, with highly satisfactory results. We make 3 SIZES The two smaller sizes for convenience of small capitalists, and for sections where the fruit crop is not very large. Send for Descriptive Circular and testimonials to

S. E. & J. M. SPROUT,
MUNCY, PENNA.

New York

'Singer' Model Sewing Machine on 3 $15

A Corder, Ruffler, Tucker, Five Hemmers, Binder, Thread Cutter, Needles, Oil and full outfit with each.—Guaranteed to be perfect. Warranted 5 years. Don't pay double for machines no better, when you can try these before you pay a cent All late improvements. Runs light with little noise. Handsome and durable. Circulars with hundreds of testimonials free.

GEO. PAYNE & CO., 47 Third Ave., Chicago, Ill.

Get a Trade for your Butter and keep it.

BUTTER PRINTER
Your own Print or Monogram on each Pound is a Guarantee of Genuineness, and will secure GILT EDGE PRICE for GILT EDGE BUTTER
Farmers and Dairymen
will find our plan of Printing and Shipping the only way to get ahead of all Bogus Butter, which is the Dairyman's Curse.
BUTTER SHIPPING BOX
A. H. REID
Manufacturer of
CREAMERIES
Dairy Supplies, &c.
1626 Barker St.
PHILA., PA.
Send for Catalogue.

SCARLET CLOVER SEED.

(Trifolium incarnatum.)

100 Bags for Sale. It is as hardy as other Clovers.

Thomas B. Price,
Lawrenceville, Brunswick Co., Va.

TURNIP SEED CROP OF '83.

Purple Top, Strap Leaf, per pound, 50 cts., postpaid, to any part of the U. S. By express, 10 lbs. 30 cts. per lb.; 30 lbs. 25 cts.; 50 lbs. 20 cts., with liberal discount to the trade. Also, White Flat, and all other approved varieties of Swede and Ruta Bagas, at low prices. Seven Top Turnip Seed for sowing as a fertilizer, 25 lbs. 20 cts. per lb., 100 lbs. $15. (As a fertilizer, three lbs. to the acre will increase the crop of wheat as much as 200 lbs. phosphate.) Drumhead and Flat Dutch Cabbage Seed $1 per pound.

C. B. ROGERS, Seedsman,
No. 141 Market Street Philadelphia, Pa.

HARD WOOD ASHES AS A FERTILIZER.

150 Car loads for sale. Can be delivered at any railroad station in the Eastern, Middle or Southern States in car loads of 14 tons. Dry unleached ashes from 25 cts. to 30 cts. a bushel; leached ashes from 10 to 15 cts. a bushel, according to locality. Jas. Hartness, Detroit, Mich.

JOSHUA THOMAS & BRO.

STEAM

Agricultural and Mill Machinery

ECLIPSE AGRICULTURAL ENGINE — FIRST PREMIUM WHEREVER EXHIBITED.

Best, Cheapest, and most Economical Engine in the Market.

STEVENS' ENGINE AND THRESHER,

Osborne Mowers, Reapers & Self-Binders.

Superior Grain and Fertilizer Drills, Chieftain Horse Rakes, Champion Force Pump, Cucumber-Wood Pumps, South Bend Chilled Plows, Little Giant Sulky Plows, Lansing Wheel and Float Harrows, Circular Saw Mills, Portable Grist Mills, Millstones, Bolting Cloths, Smut Machines, Leather and Gum Belting, &c., &c.

No. 53 Light St., Baltimore, Md.

THOROUGHBRED Registered Lincoln Sheep

From the celebrated stock of T. Walter & Son, West Chester, Pa. 1 Ram, Duke of Md., 3 years old; 1 Ewe, Dutches of Md., same age; 2 Yearling Ewe Lambs of the above; 2 Ewe Lambs do. Address

T. W. Lawford,
236 E. Chase St., Baltimore, Md.

PRATT'S ASTRAL OIL

WILL NOT EXPLODE.

Wholesale and Retail.

LAMPS OF EVERY DESCRIPTION.

For Sale by W. & H. SPILCKER,

Agents for Chas. Pratt & Co., New York. } 163 Baltimore St.

Imperial Wine Vinegar.

NONPAREIL CIDER VINEGAR.

STRICTLY pure and reliable. Many imitations. costing 3 cents a gallon, are sold as Cider Vinegar. To guard against deception, observe that packages bear our brands.

Fresh APOLINARIS WATER.

FREDK. M. BOLLMAN, Importer
63 S GAY STREET.

G. W. LEHMANN, Ph. D. *Chemist and Metallurgist Balto. Copper Works.*

W. HAGER, *Formerly Chemist of N. C. Fertilizer Control Station*

LEHMANN & HAGER,

CHEMISTS AND ASSAYERS,

57 S. GAY ST., BALTIMORE, MD.

ANALYSES of all descriptions—Manures, Soils, Chemical Fertilizers, Ores of Gold and Silver (by fire process), Copper, Lead, Manganese, etc. Clays, Coal, Limestone and other minerals. Water for steam, manufacturing and household use. Mineral waters and various products of art. Terms moderate.

"THE BEST IS CHEAPEST."

ENGINES, Horse Powers **THRESHERS** SAW-MILLS, Clover Hullers

(Suited to all sections.) Write for FREE Illus. Pamphlet and Prices to The Aultman & Taylor Co., Mansfield, Ohio.

We will send you a watch or a chain BY MAIL OR EXPRESS, C. O. D., to be examined before paying any money and if not satisfactory, returned at our expense. We manufacture all our watches and save you 20 per cent. Catalogue of 250 styles free. EVERY WATCH WARRANTED. ADDRESS STANDARD AMERICAN WATCH CO., PITTSBURGH, PA.

STEAM ENGINES

Portable and Agricultural. Send for circulars. Wood, Taber & Morse, Eaton, N. Y.

NEW

'Singer' Model Sewing Machines only $15

including an $8.00 set of extra attachments of 9 pieces and needles, oil and usual outfit of 12 pieces with each. Guaranteed perfect. Warranted 5 years. Handsome, durable, quiet and light running. Don't pay $30 to $50 for machines no better. We will send ours anywhere on trial before paying. Circulars free. Save $15 to $35 by addressing

GEO. PAYNE & CO., 47 Third Ave., Chicago, Ills.

DRUNKENNESS

CURED IN ITS VARIOUS STAGES.

DR. HAINES' GOLDEN SPECIFIC

positively destroys the appetite for alcoholic liquors in 20 days, tones the stomach, purifies the blood, aids digestion, strengthens the nerves. Can be administered without the knowledge of the patient by simply placing it in tea, coffee, or articles of food. It never fails. Cures guaranteed. For further information, address

GOLDEN SPECIFIC COMPANY,
185 RACE STREET, CINCINNATI, OHIO.

ALL GARDEN SUPPLIES.

ROB'T J. HALLIDAY,

238 W. BALTIMORE STREET,

BALTIMORE, MD.

My Catalogue for 1884 now ready and mailed free to all applicants. It contains all the new and popular plants for the Garden and Greenhouse; also Vegetable and Flower Seeds, and all garden requisites.

PENNSYLVANIA ROUTE.

FORMED by the Northern Central and Pennsylvania Railroads on the West, Northwest and Southwest to

PITTSBURG, CINCINNATI, LOUISVILLE, INDIANAPOLIS, CHICAGO, ST. LOUIS, and OTHER PROMINENT POINTS.

Baltimore and Potomac, and Alexandria and Fredericksburg Railways on the South to

WASHINGTON, RICHMOND, and all points in the ATLANTIC AND GULF STATES.

The Only All Rail Line with no Omnibus Transfer at Washington.

Northern Central, and Philadelphia and Erie Railways on the North to

HARRISBURG, WILLIAMSPORT, ELMIRA, WATKINS GLENN ROCHESTER, ERIE, BUFFALO, NIAGARA FALLS.

☞ Baggage called for and checked at hotels and private residences through to destination. Sleeping and Parlor Car accommodations secured.

Through Tickets sold and information given at Company's office,

N. E. Cor. Baltimore and Calvert Sts., At Depot N. C. Railway,

At Union Depot, Charles St., Station, And Pennsylvania Ave. Station,

CHAS. E. PUGH, General Manager. J. R. WOOD, Gen'l Passenger Ag't. Penna. & N. C. R. R.

DOUBLE HARPOON HORSE HAY FORK

No Farmer can afford to be without it. It will SAVE its cost many times. BEST IN THE WORLD! Send for Descriptive Catalogue, free.

Wennsuck Mf'g. Co. Kennett Square, Chester Co. Pa

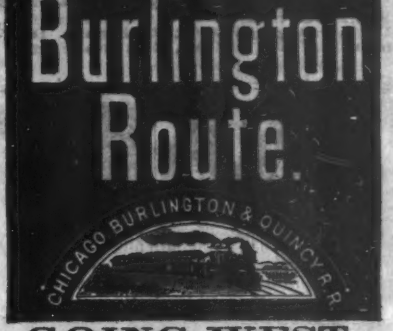
PATENTS Hand-Book FREE.

R. S. & A. P. LACEY, Patent Att'ys, Washington, D. C.

CAYUGA LAKE NURSERIES! OLD and NEW FRUITS! LARGE and SMALL. PRICES LOW. STOCK PURE. QUALITY GUARANTEED. NEW CATALOGUE containing a Beautiful Colored Plate, Calendar for 1884, &c., sent FREE. (Estab. 1855) H. S. ANDERSON, Union Springs, N.Y.

THE LINE SELECTED BY THE U. S. GOV'T TO CARRY THE FAST MAIL

Burlington Route.



GOING WEST.

ONLY LINE RUNNING TWO THROUGH TRAINS DAILY FROM

CHICAGO, PEORIA & ST. LOUIS,

Through the Heart of the Continent by way of Pacific Junction or Omaha to

DENVER,

or via Kansas City and Atchison to Denver, connecting in Union Depots at Kansas City, Atchison, Omaha and Denver with through trains for

SAN FRANCISCO,

and all points in the Far West. Shortest Line to

KANSAS CITY,

And all points in the South-West.

TOURISTS AND HEALTH-SEEKERS

Should not forget the fact that Round Trip tickets at reduced rates can be purchased via this Great Through Line, to all the Health and Pleasure Resorts of the West and South-West, including the Mountains of COLORADO, the Valley of the Yosemite, the

CITY OF MEXICO,

and all points in the Mexican Republic.

HOME-SEEKERS

Should also remember that this line leads direct to the heart of the Government and Railroad Lands in Nebraska, Kansas, Texas, Colorado and Washington Territory.

It is known as the great THROUGH CAR LINE of America, and is universally admitted to be the

Finest Equipped Railroad in the World for all classes of Travel.

Through Tickets via this line for sale at all Railroad Coupon Ticket Offices in the United States and Canada.

T. J. POTTER, Vice-Pres. and Gen. Manager.
PERCEVAL LOWELL, Gen. Pass. Ag't Chicago.
JNO. Q. A. BEAN, Gen. Eastern Ag't, 317 Broadway, New York, and 296 Washington St., Boston.

PENSIONS

for any disability also to Heirs. Send stamps for *New Laws*. Col. L. BINGHAM, Attorney, Washington, D. C.

LUMBER.

THOMAS MATTHEWS & SON,

88 N. High St. and Cor. Canton Ave. and Albemarle St., Baltimore.

White Pine and Yellow Pine LUMBER, for Building.
Rough and Dressed Lumber.

HARDWOOD FOR WHEELWRIGHTS AND CABINET-MAKERS.
SHINGLES, LATHS, PALES, Etc., AT LOWEST PRICES.

LANDRETHS' CENTENNIAL CATALOGUE "CARDENERS' COMPANION."

1784 SEED 1884

PRICE 10 CENTS. The most complete and brilliantly embellished Seed Catalogue ever published, costing fifteen cents. The article on Market Gardening under Glass is worth twenty times the price. This being OUR ONE HUNDREDTH YEAR, we publish this Ornate Guide for Garden and Farm. To all sending us TEN CENTS in stamps, we mail a copy, and on Orders for Seed will give credit for that amount. Address
LANDRETH & SONS, Seed Growers, Lock Box, Phila., Pa.

SLINGLUFF & CO.

OFFICE, 157 W. Fayette St. } BALTIMORE. { WORKS, Foot Leadenhall St.

Manufacturers and Manipulators of

PHOSPHATES.

We are now offering to the trade the following *WELL-KNOWN BRANDS OF GOODS*, which we guarantee fully up to the standard:

SLINGLUFF'S DISSOLVED GROUND BONE,
Containing 3 per cent. of Ammonia.

SLINGLUFF'S DISSOLVED SOUTH AMERICAN BONE ASH,
Containing 40 to 44 per cent. Soluble Bone Phosphate.

SLINGLUFF'S DISSOLVED SOUTH CAROLINA PHOSPHATE,
Containing 20 to 22 per cent. Soluble Bone Phosphate.

To meet the demand for a High-Grade Fertiliser, we are offering

SLINGLUFF'S NATIVE SUPER-PHOSPHATE,
Prepared entirely from Animal Bone, highly ammoniated. Also,

SLINGLUFF'S No. 1 AMMONIATED SUPER-PHOSPHATE.
This we can confidently recommend as one of the best fertilizers sold in the market at the price.

FOR SALE.

FIFTY Southdown Ewe Lambs and a few Bucks, Price $10 a piece
FRANCIS MORRIS,
Oakland Mills, Howard Co., Md.

TRADE-MARKS, PRINTS, LABELS. **PATENTS,** COPY-RIGHTS, DESIGNS Re-Issues.
Send description of your Invention. L. BINGHAM, Patent Lawyer and Solicitor Washington, D. C.

University of the State of New York.
AMERICAN VETERINARY COLLEGE,
141 West 54th Street, New York City.

The Regular Course of Lectures commences in October each year. Circular and information can be had on application to A. LIAUTARD, M. D. V. S., Dean of the Faculty.

W. H. Martenet, D. V. S.,
GRADUATE OF THE
AMERICAN VETERINARY COLLEGE.

OFFICES: Alsquith & Monument Sts., 152 Saratoga Streets; Residence, Hoffman St., East of Gay, Baltimore, Md.
Telephone at Residence.

KNABE PIANOFORTES.

UNEQUALLED IN
Tone, Touch, Workmanship and Durability.
WILLIAM KNABE & CO.
Nos. 204 and 206 West Baltimore Street, Baltimore. No. 112 Fifth Avenue, N. Y.

Virginia Lands.

Upper James Real Estate Agency,
By WILLIAM HOLMAN,
CARTERSVILLE, Va.,

WHO offers for sale upwards of 13,000 acres of land lying in one of the most desirable regions of Eastern Virginia. Catalogues sent n application.

The Rasin Fertilizer Company,

PROPRIETORS OF THE

"SEA-WALL GUANO WORKS."

SITUATED ON THE PATAPSCO RIVER, AT SEAWALL, ANNE ARUNDEL CO.

The most extensive and permanent WORKS in the United States, and the whole under the direct supervision of Mr. R. W. L. RASIN, the General Manager of the Company, whose thorough knowledge and experience is a guarantee of the quality of their FERTILIZERS.

Large Stocks on hand and ready for delivery. Your orders Solicited.

The Rasin Fertilizer Company,

20 & 22 South Street, Baltimore.

Peruvian Guano.

HIGH GRADE PERUVIAN GUANO

Direct from PABELLON DE PICA, the richest deposit of Peru, containing 9¾ to 10 per cent. of Ammonia, also a full supply from LOBOS' deposits, containing 5½ to 8 per cent. of Ammonia, which I offer for sale direct from Guano storehouses, Waters' Wharf.

J. Q. A. HOLLOWAY,

107 McElderry's Wharf,
BALTIMORE, MD.

FOUTZ'S
HORSE AND CATTLE POWDERS

NO HORSE will die of COLIC, BOTS or LUNG FEVER, if Foutz's Powders are used in time.
Foutz's Powders will cure and prevent HOG CHOLERA.
Foutz's Powders will prevent GAPES IN FOWLS.
Foutz's Powders will increase the quantity of milk and cream twenty per cent., and make the butter firm and sweet.
Foutz's Powders will cure or prevent almost EVERY DISEASE to which Horses and Cattle are subject.
FOUTZ'S POWDERS WILL GIVE SATISFACTION.
Sold everywhere.

DAVID E. FOUTZ, Proprietor,
BALTIMORE, MD.

WM. STUART SYMINGTON. THOS. A. SYMINGTON.

Symington Bros. & Co.,

Office, N.E. Cor. Holliday St. & Exchange Place. Works, Locust Point, Baltimore

Manufacturers of the

ORIOLE FERTILIZERS,

☞ Each grade of these fertilizers is made under a different and distinct formula, and each contains what is most needed by the particular soil for which it is intended. We guarantee our goods exactly as represented.

SYMINGTON BROS. & CO., Manufacturing Chemists.

R. J. BAKER. ESTABLISHED 1837. R. J. HOLLINGSWORTH

HIGH GRADE FERTILIZERS.

SULPHATE OF AMMONIA. PURE NITRATE SODA.

R. J. BAKER & CO.

MANUFACTURERS AND DEALERS IN

CHEMICALS,

Ammoniated Super-Phosphate for all Crops. Pure Dissolved Raw Bone. Pure Fine Ground Raw Bone. Sing Super-Phosphate of Lime for Tobacco.

HIGH GRADE IMPORTED BIRD GUANO $25 PER TON.
BIRD GUANO AND POTASH FOR CORN $25 PER TON.
FACTORY AT LOCUST POINT.

Office, 36 & 38 S. Charles St., Baltimore, Md.

ENTERED AT POSTOFFICE, BALTIMORE, AS SECOND-CLASS MATTER.

ll St.

ich we

ASH,

TE.

NO.

ANO

est de-
of Am-
eposits,
which I
Waters'

AY,

ED.

ERS

ve Fe.
OLERA.
OWLS.
f milk
or firm
EVERY

S.

ved

TON,

ld.